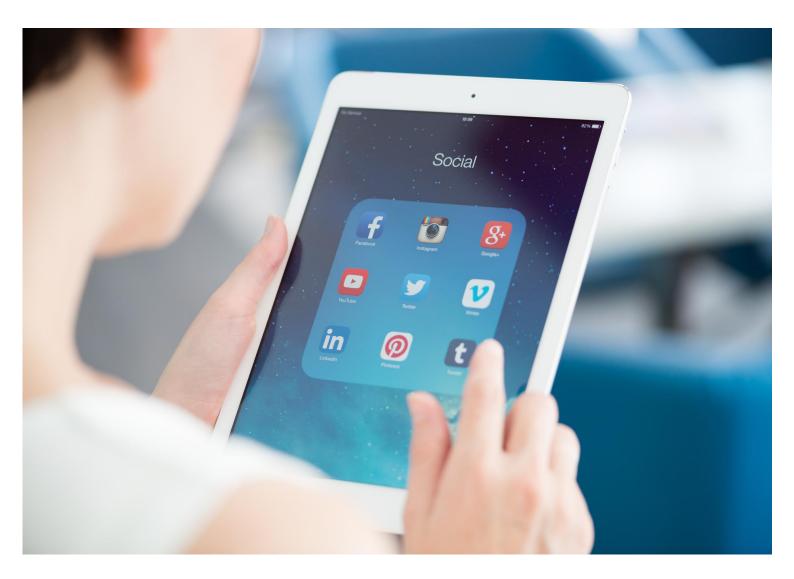# Social media and student outcomes: teacher, student and employer views

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About the research

Social media and student outcomes: teacher, student and employer views

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Accessing and posting on social media has become a daily habit for many Australians. Social media is used by individuals to keep in touch with friends and family, by groups to inform their members of relevant information and by organisations to market their services and products. However, is there a role for social media in vocational education and training (VET)?

This report looks at how social media is being used within the VET sector as a tool in teaching and learning. The researchers conducted interviews with teachers, students and employers across three different registered training organisations (RTOs) to determine the types of social media most useful in teaching and learning, how they are being used, and whether the outcomes for students are being improved.

Key messages

- Given the scope and purpose of this study, it appears that there are currently only a limited number of Australian VET institutions actively using social media in their teaching. These institutions all had clear guidelines and technological mechanisms for the positive use of social media in teaching. A larger study, one involving a more representative sample, is required to fully understand the uptake of social media in VET courses and its impact on outcomes.

- The main types of social media currently used in VET are Facebook and YouTube. Facebook is used for its group functionality and its capacity to make announcements, while YouTube is used to enable students to upload videos of themselves performing tasks, and teachers to share relevant content with students.

- Students prefer to use the form of social media that will be of most relevance to their future roles. For example, marketing students like to use Facebook and Twitter because these tools are widely used for promoting products and events.

- The use of social media in courses encourages greater engagement in learning in some students and, based on the anecdotal evidence presented, may result in higher completions than in those courses not using social media.

- In order to present evidence for audits of teaching and assessment that utilises social media, teachers are having to transfer exemplar information from the social media platform to the institute's learning management system rather than presenting it as is, thus double-handling information. Clarification from institutes and regulators on the forms of technologically enabled assessment that are acceptable as evidence for audits is needed.

- Another practical consideration for VET teachers and institutions is that students do not necessarily understand the privacy issues surrounding social media in the classroom context. Teachers find they first need to teach students about the relevant privacy options to ensure that posts remain out of the general public eye. This is important as RTOs are obliged to comply with the Australian Privacy Principles.

- Employers found social media prompted them to be more connected to the theory side of the student's learning. They also believed social media helped to smooth the transitions between the learning and work environments and they emphasised the benefits of Facebook as they affected the administration of training.

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📝 Executive summary

Aims

The aims of the study were firstly to examine the forms of social media used to assist students to engage with and to complete their vocational education and training (VET) programs, and secondly to investigate the outcomes from the use of social media, including the benefits associated with increased levels of collaboration, increased engagement by students with an education or training program and, ideally, higher rates of completion. Finally, the study examined how social media is integrated into VET assessment, and how these forms of assessment are accommodated by the audits that determine whether the training organisation is meeting the required national standards. In summary, this study is designed to extend understanding of and in turn to improve the practices associated with, the use and opportunities for social media in VET programs. To date, very few studies have investigated the use and impacts of social media in the VET sector, with the majority focused upon the higher education sector.

Methodology

These three aims and the associated research questions were addressed through interviews and small group discussions with 32 VET teachers and 70 students; six employers were also interviewed. The sample came from three training organisations: Federation Training of TAFE Victoria; the Open Training and Education Network (OTEN) of TAFE NSW; and TAFE Queensland. These institutes were identified through an initial search of the websites of registered training organisations (RTOs) to reveal the prevalence of social media and other new technologies in VET. Gaining samples of VET teachers, students and employers allowed a 360-degree view of the perceived advantages and disadvantages of the use of numerous forms of social media.

Key findings

Types of social media: views of teachers, students and employers

The first aim was to understand the use and types of social media in VET programs. Teachers reported that several forms of social media were being used, with YouTube and Facebook the major forms of social media adopted by VET teachers and their students.

YouTube fits well with the objectives of institutions to design and increase the use of self-paced online learning. YouTube also allows the teacher or student to use privacy settings to ensure control over the audience's ability to view students' videos, which are often concerned with their performing a task or job.

The popularity of Facebook for social networking has encouraged teachers and their students to use Facebook as an educational tool. The major benefits from Facebook cited by VET teachers are its accessibility, ease of use and being free. In particular, Facebook groups allow VET teachers to provide updates, announcements, photos and videos, and it creates a space for students to ask and answer questions. Students are being connected with each other and so begin sharing and collaborating, despite being in different year levels in the same qualification, of different ages and having different life experiences. It is this ability

to connect across all types of students that is encouraging VET organisations to use social media as a dominant feature in their fast-growing online and distance learning programs.

Interestingly, Facebook is being introduced into VET courses in three ways. Firstly, some organisations have established an institutional Facebook site, which is used by teachers and the online and distance students. Secondly, closed Facebook groups are being set up and administered by VET teachers and, finally, the students themselves are setting up Facebook groups for their courses and inviting fellow students in the same course to join.

While YouTube and Facebook are the major forms of social media currently used by VET teachers and their students, several other tools are also being trialled. However, the consensus among the teachers interviewed is that to date they have not been very successful. Blogs have some use for students publishing their experiences. Teachers and students reported limited use of Instagram, LinkedIn, Tumblr and Pinterest.

Different forms of social media appear to be attractive to different types of VET students. Many of the VET qualifications that require students to develop an ability to work and cooperate in teams with diverse people (for example, marketing, business, event management, social work, community work, and nursing) appear more likely to incorporate Facebook and Twitter into their VET courses. Trade teachers in apprenticeship programs reported that their apprentices were major users of YouTube, as the videos show the performance of practical skills, often over several steps.

Employers, like the VET teachers and students, were highly supportive of the use of social media for training. They were impressed by the quality of the online materials being used and the integration of the numerous forms of social media used to engage and regularly communicate with their apprentices or trainees while they were on the job. Employers had no major issues about their employees accessing social media while on the job, as long as the reasons for accessing a YouTube video, a Facebook group or Twitter were explained to them. In particular, employers emphasised the benefits flowing from the integration of social media into the learning management system; for example, students could be reminded of particular deadlines, dates or submissions via social media without too much disruption to their workplaces. As a result, the frequent transitions between work and TAFE went more smoothly, with less interference and less downtime in production.

Impact on students' levels of interest, engagement and completions

The second aim of the study was to investigate the qualitative and more quantitative evidence on the perceived impact of the use of social media on the training of students. In the interviews, many VET teachers indicated that they believed the use of social media was resulting in more engaged students and higher levels of completions. Their data were anecdotal but also based on observations over time. However, some teachers were much less enthusiastic, arguing that they could not see any real improvements in engagement, attendance, grades or completions.

To date, only a few VET institutions have attempted to study in a more quantitative way the relationship between the use of social media and increased levels of engagement, improved attendance and higher completion rates. Those few studies that show higher completion rates in online courses using Facebook groups might be indicative of students' higher levels of engagement in their studies. In addition, there was evidence that teacher input into Facebook groups possibly promoted more focused and course-specific discussions, with

these contributing to the higher completion rates. Also, a small survey as part of the current study found that the majority of surveyed students agreed that their use of social media had encouraged them to be more engaged and interested in their training, and they were also learning more from other students.

Social media, assessment and institutional audits

The third and final issue examined in the current report was the attitudes to and use of social media in VET assessment. The adoption of technologically enabled delivery and assessment does raise challenges for assessment practices and procedures: the validity and reliability of assessment, authentication, and the need to train and develop staff involved in these new forms of assessment.

Based on the interviews and small group discussions with students in this study, social media currently is at best a small part of a larger assessment task. Teachers report many reasons for this lack of use: a lack of institutional support for the use of any evidence gathered from outside the learning management system; a lack of technological support for teachers wanting to use social media, including little formal training; and the conservative attitudes of teachers about the use and experimentation with new forms of technology. Further, although e-assessment guidelines are now available, auditors do not appear to be showing a strong level of support for any forms of technologically enabled assessment.

Next steps

This study is part of an increasing number of investigations into how social media might be used to promote greater levels of interest, engagement and collaboration among learners. However, like much of the research to date, this study is small and exploratory. VET researchers can play an important role in contributing to this debate by completing larger-scale and more longitudinal projects into the impacts of social media upon VET learners, where it is used in their training.

The current study reveals that future VET research needs to investigate further the advantages and disadvantages of different types of social media, its impacts across different types of VET students, by delivery mode (for example, traditional delivery versus online and distance learning), and by levels of teacher input and support. Furthermore, as numerous forms of social media are being used in the same VET qualification, we need to better understand how the combination of different social media might have different types of impacts.

ⓘ Introduction

Increasingly, social media such as blogs, online forums, wikis and social networking sites have become an integral part of the personal, school and working lives of young adults. Broadly, social media encompasses: social networking sites, such as Facebook, Twitter and LinkedIn; media-sharing sites, such as YouTube and Flickr; creation and publishing tools, such as wikis and blogs; aggregation and republishing through RSS feeds; and remixing of content and republishing tools (Greenhow 2011; Harris 2012; Buzzetto-More 2015; Gonzalez-Ramirez et al. 2015). To summarise, social media includes all forms of electronic communication through which users create online communities to share information, ideas, personal messages and other content.

Worldwide, growth in the use of social media in education and training is part of a movement towards more active forms of student learning, learning that is collaborative, experiential and problem-based and which can involve situated learning. Linked to the emergence of these more active forms of student learning are the debates associated with the need to rethink the nature of pedagogy, learning and assessment in this more digital age (Beetham & Sharpe 2013).

The attention in this report to the growing use of social media builds upon earlier work in the Australian VET sector where prior projects have conducted case studies on registered training organisations and various industries relating to the increased use of e-learning, as well as the challenges in providing valid and reliable online assessment (Callan & Bowman 2010; Callan & Clayton 2010; Callan, Johnston & Poulsen 2015). These studies report that e-learning on the one hand is seen by VET teachers, students and employers as providing more flexibility, better customisation, reduced travel and related expenses, although it is recognised that there are also numerous challenges. On the other hand, quality online delivery is expensive to produce and requires considerable upfront development costs, associated with technology and training. Moreover, there are other issues that have yet to be fully resolved relating to how well assessment using e-learning meets the standards of assessment (Callan, Johnston & Poulsen 2015).

The three aims of the study, addressed by gaining the views of VET teachers, students and employers, were to:

- investigate what forms of social media are being used to assist students to succeed with their training

- compare the student outcomes being achieved through the use of social media with those realised through more traditional forms of learning

- explore what developments are occurring with assessment practices and national audit procedures to accommodate the growing use of social media in VET organisations.

The use and types of social media

A new, but increasing, literature is investigating the advantages and disadvantages of the use of numerous forms of social media to facilitate student learning. Overall, much of this prior research is focused on the higher education sector, with only a handful of studies reporting on the applications and experiences with social media in the VET sector.

Reviews of this past research describe the impacts of social media usage more generally (Tapscott 2009; Tadros 2011; Tess 2013). In some cases the impacts of specific forms of social media are analysed (Sim & Hew 2010; Tess 2013). Overall, these reviews reveal that the vast majority of students do have a social networking account. Access to social media provides opportunities to build relationships and offers high degrees of freedom of choice and expression, including opportunities for collaboration, entertainment and play in their work, education and social lives.

However, despite the claims about the benefits that social media tools bring in terms of opportunities for educational innovation, many teachers are not adopting new technologies in educational settings. Numerous reasons are given to explain the low take-up rates, including the view that many new technologies are generally 'oversold and so underused' (Greenhow & Gleason 2014; Manca & Ranieri 2016). Teachers in schools and tertiary institutions have access to information technologies at home and on campus, and many make intensive use of these technologies for their research, but not to deliver instruction. Their reluctance is not a simple case of technophobic attitudes or a lack of confidence. Rather, it is linked to a range of beliefs and attitudes about teaching and learning, including the learning practices of their students. The majority of teaching staff have a positive attitude towards the adoption of social media as a teaching tool, but only a minority are using or planning to use these tools (Manca & Ranieri 2016). A major reason is that the purported benefits of social media do not emerge easily in practice. The introduction and integration of social media into any form of education and training can be a very challenging task, with the successful integration needing time, training, ongoing technical support, and changes to teachers' attitudes and their organisational cultures.

Positive outcomes linked to the use of social media

In a major review of the general use of social media, Tess (2013) concluded that the majority of studies to date report more positive than negative outcomes for learners. On the positive side, social media use generally is linked to:

- more effective communication among future healthcare workers, where such skills were seen as critical to their ability to work in community practices (for example, King et al. 2009).

- increased engagement among trainee teachers (Sadaf, Newby & Ertmer 2012).

- improved time spent in preparing for class and lessons (Junco, Heiberger & Loken 2011).

Focusing more specifically on particular forms of social media, other reviews and studies have found positive outcomes for:

- *Blogs*: for their value as learning journals, an outlet for expressing ideas, emotions and feelings, for communication with other students and instructors, and in creating a sense of community among learners (Sim & Hew 2010; Top 2012). Blogs can help student learning by providing access to different points of view, enhancing the quality of critical

and creative thinking skills and by allowing more opportunities to reflect on how their learning is linked to changes in behaviours (see Sim & Hew's 2010 review). As reported in other studies specifically on blogging (Sim & Hew 2010; Dabbagh & Kitsantas 2011), blogging assists students to direct their own learning, increases their engagement in course material and promotes the development of informal learning communities. Similarly, Churchill (2009) found that promoting a blog-based environment enables a learning community in which learners feel that their needs and opinions are seen to be important. At their best, these blogging communities facilitate student access to course material and increase a desire among students to post their reflections following their formal learning tasks, while bloggers are motivated by the frequent and supportive comments by their peers about their contributions.

- *Facebook*: increases student interaction, participation in course discussions, and adds value to student learning through having teaching notes and assessments posted online (Ophus & Abbitt 2009; McCarthy 2010; Irwin et al. 2012; Gonzalez-Ramirez et al. 2015). Sharma, Joshi and Sharma (2016) found that collaboration is the most important predictor of Facebook adoption for achieving academic outcomes, followed by a desire to share, the pure enjoyment and the perceived usefulness. Students and teachers perceive the sharing of learning material through Facebook as an example of student-centred learning, in that students can feel more empowered through shared ownership of study resources and materials through their online identity. Other studies confirm the disruptive role of Facebook usage, whereby individuals who are extrovert, agreeable or lonely are more likely to outperform in studies through the usage of Facebook (Kaya & Bicen 2016; Ditrich & Sassenberg 2017).

- *Twitter*: is linked with increasing student engagement, increased levels of contact with instructors, and reports by learners that they are more satisfied with their levels of feedback in a course (Dunlap & Lowenthal 2009; Junco, Heiberger & Loken 2011).

- *YouTube*: is linked to numerous motivations associated with seeking entertainment by not only viewing videos but also reading comments, by liking and disliking content, and by being able to share information (Kahn 2017). YouTube's functionalities of uploading and video viewing encourage both active and passive user engagement. By comparison with Facebook, YouTube, with its focus on viewing videos, is linked to empowering users to be more creative, including seeking out new business opportunities (Kahn 2017).

Another perceived advantage of new forms of social media is their potential to better connect formal and informal learning. There is a well-established view that learning is most effective when learners engage in both formal and informal learning activities. Formal learning is typically highly structured learning that occurs in courses, classrooms and institutions, resulting in learners gaining grades and ultimately a qualification. Informal learning on the other hand is more learner-driven and involves observation, trial-and-error learning, interaction with others and reflection (Cross 2007). As Attwell (2007) observes, in the workplace informal learning occurs as workers ask questions and observe others, with these independent learning activities linked to 80% of an individual's knowledge about their job.

Evidence is also emerging (for example, Tess 2013) that, when appropriately structured, social media can link classroom learning to activities outside the classroom by extending their communication and sharing with others. Students use various forms of social media

after their formal classes or training sessions to continue to think and interact with each other about topics explored in class.

Negative outcomes linked to the use of social media

However, there are drawbacks associated with the general use of social media and the use of specific forms of social media. Even in many of the studies reporting positive outcomes, students comment upon the disadvantages associated with their use of social networking in education and training. These negative outcomes include:

- Some students are less supportive of social media being used for what they perceive to be the less enjoyable purposes of learning, education and training (Madge et al. 2009; Tess 2013). They feel that social media is for bonding and sharing with friends, and educational and training organisations should not highjack its use for non-social purposes. In addition, as Friesen and Lowe (2011) remind us, social media was not developed for formal education. Simply because it is so widely available and used by young people does not validate its suitability for learning, education and training.

- The narrow use of social media (for example, blogs) can be less attractive and less positive for learners compared with contexts where there is a wider range of choices around social media for student learning and interaction (Weller, Pegler & Mason 2005).

- There is a lack of time to learn these new technologies, resulting in a lack of confidence, unfamiliarity and confusion (Ellison & Wu 2008).

- In a recent detailed review of the literature, Watts and colleagues (2017) describe how cyberbullying continues to be a disturbing trend not only among adolescents but also with undergraduate students. Studies highlight that reported victims of cyberbullying experience anger, poorer academic outcomes and psychological problems; moreover, the experience may lead them to become cyberbullies themselves or continue to be victims. Despite increased public awareness and empathy, undergraduates are still less likely to report cyberbullying. In the context of reducing or eliminating this problem, Watts et al. (2017) cite the value of a wide range of strategies, such as reporting, monitoring online interactions and legal actions to address cyberbullying in all areas of education.

- At times some individuals do not follow the general 'netiquette' or rules explicitly or implicitly established for the group relating to activities on a social media site. Pena and Brody (2014) report that users judge such norm-deviant posts by others to their individual profiles as inconsiderate, reflecting negatively on the image of their group. However, while group members perceive a deviate's behaviour as questioning their group's image, rather than breaking it down, Ditrich and Sassenberg (2017) found that a Facebook or similar group promotes a 'natural purification' within the group, which eliminates such negative influences.

There are real risks that social media can be a medium for personal attacks, such as blackmailing, extortion, cyberbullying and cyberstalking (Shullich 2011). Another key issue is the risk to business security, with almost daily media reports of how organisations are experiencing major security breaches due to social media-related cyber attacks. For instance, the media frequently highlights that Facebook and Twitter scams are now the most common form of malware being distributed. Facebook, LinkedIn and others regularly report that as much as two to five per cent of user accounts are false and that the platforms lack reliable systems for identifying and counting duplicate or fraudulent accounts. The risks

include cyber attacks and scams, brand impersonations, account takeovers, hijacking of accounts and pages, customer fraud, and major data breaches. The outcomes include lost revenue, damage to the reputation and brand, a loss of intellectual property and major costs to repair the damage to systems.

The management of social media requires procedural and technical controls, such as policy and technology, while the implementation of policies and procedures needs to be supported by training. Awareness training helps to reinforce knowledge of the policies and provides opportunities to propose best practices (Shullich 2011). Regular risk assessment is also critical.

However, in considering these positive and negative findings, it is important to view social media as another tool that offers choices for learners and teachers. Although, as Tadros (2011) argues, this is the age of the digital native, it is premature to call for the abandonment of more traditional methods of teaching and instruction in favour of new media. Rather, we need to view social media as an alternative to consider in some, but possibly not all, teaching and learning environments. Social media is another tool for education and training, which like more traditional forms also has both advantages and disadvantages.

Assessment practices, audit and social media

VET practitioners and students report they are motivated by the potential benefits of e-learning and associated e-assessment use to improve the quality of courses and training. E-learning is associated with more flexibility in program delivery, more customisation and more collaboration and teamwork among online students (Kanuka & Rourke 2008; Callan, Johnston & Poulsen 2015; Callan et al. 2016).

In addition, advocates for the use of technology to improve assessment practices argue that it provides many benefits over more traditional forms of assessment. These benefits include greater flexibility in the location and timing of assessments, greater speed in delivering the results of assessment, more regular feedback via short online tests and quizzes, and more opportunities for students to show evidence of their skill development through the posting of videos and photographs (Asuni 2013; Callan et al. 2016). E-assessment promotes innovation in assessment, as teachers explore how the interactivity afforded through the use of online learning and multimedia might open up new ways to design both formative and summative tasks for learners (Noorbehbahani & Kardan 2011).

However, as Callan, Johnston and Poulsen (2015) and Callan et al. 2016 point out, the adoption of technologically enabled assessment has downsides, which need to be well managed. One of the aims of regular audits in VET institutions is to determine whether the Australian Quality Training Framework (AQTF) standards are being met in the delivery of nationally consistent, high-quality training and assessment services for the clients of the VET system. The same VET teachers who advocate for the increased use of e-learning and e-assessment also note major challenges associated with maintaining the validity, sufficiency and authenticity of evidence (including plagiarism, inappropriate collaboration, cheating and identity fraud) and how these issues impact upon the outcome of audits of assessment practices adopted in training organisations (Callan, Johnston & Poulsen 2015; Callan et al. 2016). In addition, there are concerns about the motives behind the increased use of

technology in VET assessments, with financial reasons and cost savings to VET institutions and industry being judged to be more important than benefits to learning and learners (Brown, Lauder & Ashton 2010; Callan et al. 2016).

Research questions

There are major gaps in our understanding of the role and use of social media in vocational education and training. Many VET organisations seek to move to more student-centred delivery of their programs, with increased flexibility and customisation and with a growth in their online presence. It is therefore important to better understand how teachers, students and employers are responding to opportunities to bring social media into VET courses and qualifications.

The literature review highlighted the many perceived advantages and challenges in using specific forms of social media in training. Given the phenomenal growth in the social use of social media, it is unsurprising that the users of social media are exploring and extending its applications into education and training. However, due to the limited past research in the area there is little insight to be gained about the use of social media in training organisations in other countries. In addition, past studies predominantly study the views and experiences of European and US university and college students, which may not be generalisable to the Australian context.

Given these gaps in our understanding, the current study addressed the following research questions:

- What are the policies of VET institutions on the use of social media?

- What forms of social media are being used in VET programs, and what are the perceived advantages and disadvantages in their use, and teacher and student motivations for the use of social media?

- What are the opinions of employers about the use of social media in the VET programs being completed by their employees?

- What is the perceived impact from the use of social media upon the levels of student engagement, participation and completion rates?

- Given the increased growth in the use of social media in our social lives, what are the attitudes and experiences of VET teachers in the use of social media for the purposes of assessment and audit in VET programs?

Methodology

The methodology involved three stages:

- website searches of public and private registered training organisations (RTOs) to identify potential sites for interviews

- interviews and small group discussions with 32 VET teachers, 70 students and six employers across three RTOs in order to address the research questions

- a small follow-up survey with students on their attitudes to social media and its effect on their outcomes.

Gaining samples of VET teachers, students and employers allowed a 360-degree view of the perceived advantages and disadvantages of the use of numerous forms of social media.

Website searches of RTOs

An initial list of potential training organisations that appeared to use social media was developed using searches of the websites of public and private training providers and searching organisations specifically mentioned in various articles (for example, NCVER reports) and conference reports (for example, No Frills, AVETRA) as having involvement in the use of social media, gamification and simulations. Appendix B provides a brief summary of the findings from the web searches. These short profiles show that RTOs are embracing new technologies in their teaching and learning, including the delivery of training through special training centres, virtual classrooms, gamification, blended delivery and the incorporation of various forms of social media to assist and to promote learning. These eight profiles are not meant to represent all of the innovations clearly occurring, but they do provide some interesting insights that are worthy of more detailed investigation, especially around the growing use of simulations and gamification in VET courses, which was not a core interest of the current study.

Follow-up checks were undertaken with these institutions to confirm what was reported on the web and other sources about their use of social media. The list was narrowed down to three sites across Australia willing to cooperate in the current study: Federation Training (Victoria); TAFE NSW's Open Training and Education Network (OTEN); and TAFE Queensland, in particular teachers and students on its campuses at Southbank, SkillsTech and Caboolture. A brief description of the key characteristics of each site is described in appendix C. Ethical approval for the conduct of the interview study was gained separately from each site. These institutions also provided the research team with copies of their policies relating to social media use to help with the examination of the first research question.

Interview study and samples

Interviews were conducted with teachers, students and employers across the three institutes to allow the development of a 360-degree analysis of the drivers, key challenges, outcomes and related issues on the use of social media in VET. Each teacher, student and employer was interviewed using a semi-structured questionnaire. Teachers were interviewed individually, although in a few cases due to timing and other logistical reasons

some teachers were interviewed in small groups. All the students were interviewed in small groups in class time or when convenient between classes. All the employers were interviewed individually and by teleconference. Again, mostly for logistical reasons, a few students completing apprenticeships were interviewed along with their employers in their workplaces.

In terms of recruitment, the teachers interviewed had been identified by senior leaders in their organisations as major users of social media. These teachers then became pivotal in the recruitment of students and employers for the research. The teachers gained the consent of their students for the research team to visit their classes to undertake the small group discussions. Employers were also firstly contacted by teachers, who gained their consent and passed their names onto the research team. Therefore, these samples were purposive, and not representative of their populations. Given that our initial search of VET organisations revealed there are only a limited number of data sources that can contribute to the study, purposive sampling was used. It is also a cost-effective and time-effective sampling method and one that matched the budget and timeframe of the project.

All interviews with the teachers and employers and small group meetings with the students were completed from October 2016 to April 2017. Overall, 32 teachers, 70 students and six employers were interviewed. The teachers were involved in a wide range of VET programs, including nursing, health, community services, marketing, business, events management, social work, pre-apprenticeships and apprenticeships. Interview lengths varied, with interviews with teachers ranging from 45 to 90 minutes, student discussions averaging 60 minutes each and interviews with employers lasting for 20 minutes on average.

The interview questions used for each group are presented in appendix A. The semi-structured format with each group of interviewees allowed for the use of probes and short follow-up questions to seek additional information. Each interview or small group discussion began with an explanation of the aims of the study and with clarification of what was meant by the use of social media. The interviewer explained that social media included: social networking sites, such as Facebook, Twitter, and LinkedIn; media-sharing sites, such as YouTube and Flickr; and wikis and blogs.

Interview notes and transcriptions were subjected to detailed examination using thematic analysis (Boyatzis 1998). This approach allows the application of both semantic (explicit) and latent (interpretive) levels of analysis. Statements are grouped according to common conceptual meanings and themes, and these themes become the core of the analyses. This report presents the major themes found. Specific comments by individual teachers, students and employers are included to illustrate their viewpoints on these topics.

Follow-up student survey

All 70 students interviewed were invited to participate in a short follow-up survey in class, consisting of four short statements relating to whether they thought social media would affect their outcomes. In total, 42 of the 70 students (a response rate of 60%) completed the short survey. Non-responses were due to students leaving the room immediately after the group discussions to attend other classes, while others chose not to participate. This survey was conducted to complement the student interviews and provide further supporting evidence around their views on social media.

VET institution policies aim to ensure that the use of new technologies is encouraged and adopted.

🔍 Findings

This section is structured in order of the research questions: examination of the policies of VET institutions about the use of social media; the forms of social media being used and the perceived advantages, disadvantages and motivations for their use; the opinions of employers about the use of social media; the perceived impact from the use of social media on the levels of student engagement, participation and completion rates; and the attitudes towards and experiences of VET teachers in the use of social media for the purposes of assessment and audit. The key findings are discussed under each heading and, where appropriate, are supported by quotes from the interviews.

Social networking and the online policies of VET organisations

VET teachers and students are guided by their institute's policies on the use of social media. A useful starting point is a brief examination of the variety of policies provided by the three training organisations selected for this research. Overall, these policies aimed to ensure that the value of new technologies is understood and that new technologies are encouraged and adopted, where appropriate. Generally, the institutes' policies promote a wide range of social media (for example, LinkedIn, Facebook, You Tube, Twitter) as potential tools for teaching staff, non-teaching staff and students to engage with the numerous communities, stakeholders and other audiences of these institutions.

An examination of the policies at the three institutions reveals, as might be expected, that they are based on a number of common broad guiding principles. For instance, across the three VET organisations these guiding principles encourage 'a common-sense approach to the use of social media'. These common-sense principles are also linked to standards that include adherence to relevant departmental policies on the code of conduct: the need to protect the reputation of the institution when using any form of social media; not to act unlawfully, such as breaching copyright when using social media; being clear that any personal views being expressed are attributed as their own and not necessarily the views of their organisation; and not disclosing on social media any confidential information obtained through work.

In addition, in some of the policy documents, more specific advice on best practice is included. Examples include, for instance, the need to keep an appropriate profile page on a social networking site and the need to understand what is appropriate or inappropriate in making comments on a networking site or when contributing to a blog or website on behalf of their training institution.

Where policies include sections that specifically deal with the use of social media in teaching activities, there are clear messages about the currency, quality and interactive nature of the sites. For example, there is a need for social media sites to be current and interactive, and teachers should try to ensure that their social media is relevant, has consistent posts and receives traffic from students. In addition, when posting to social media teachers are reminded that they need to consider how they can ensure a multi-way interaction to build strong and interactive relationships with students. Also, when contributing and managing a site, teachers are advised they need to ensure that their identity and role are clear to students, and who they are representing in any views presented to students.

Apart from the guidance offered by sound policy parameters, there are also technological mechanisms at work to support the appropriate use of social media and the implementation of an institute's polices. The use of private and closed access is encouraged. YouTube has the option of a private channel and its use is encouraged by these institutions. Facebook, with its greater variety of tools, seems to raise the need for greater use of technical checks. For instance, in some institutions the personal Facebook sites of students are blocked while they are on campus. The use of the institute's Facebook is stipulated (for example, OTEN), and the use of closed Facebook groups are promoted as offering the best technical solutions for managing privacy, confidentiality and appropriate access. No technical support is available to teachers who use unofficial Facebook pages.

In summary, these institutes' social media policies are very positive in acknowledging how the appropriate use of social media can enhance an organisation's reputation and that of its staff and students. However, to achieve these positive outcomes, these policies outline numerous standards and principles that need to be followed by teachers and students. The policies specifically give advice on the need to protect and respect the views and rights of individuals, including ensuring that confidential information relating to individuals, organisations and key stakeholders is not violated. By stipulating these requirements, they may facilitate appropriate uptake of social media.

Forms of social media used to deliver VET programs

Teachers in these institutes are very aware of the major social media sites. About two-thirds of the teachers interviewed had visited a social media site within the previous week for their personal use and about half had posted content.

According to the teachers interviewed, several forms of social media are being used in their training organisations. The major social media tools are YouTube and Facebook, followed by the use of blogs, Twitter and Instagram. At an institutional level, social media (often through Facebook) is a major tool for communicating with students, key stakeholders and others about the programs, activities and general marketing of the organisations. It is seen by the marketers in these three institutions as, in their own words, a 'fun way to communicate', and as one of the best ways to 'keep younger students in the loop'. In particular, Facebook, Twitter and Snapchat drive numerous forms of marketing and communication, where the aim is to promote the brand and image of the VET organisation through events, competitions, awards and information about student and institutional achievements.

Indeed, the success of social media at the institutional level in connecting with current and future students was one driver for expanding its use to the face-to-face, online and distance courses in these VET organisations. For instance, in around 2010 the Open Training and Education Network introduced a dedicated social media coordinator, who began working with community managers and OTEN teachers to build capability for setting up Facebook pages and groups for teaching and training.

An overview is now provided of the social media tools used most frequently by VET teachers and students — YouTube and Facebook — followed by VET teacher and student views about the use of other forms of social media, including blogs, Twitter and Instagram.

Several forms of social media are used to deliver VET programs and include YouTube and Facebook, followed by blogs, Twitter and Instagram.

YouTube and VET courses

YouTube offers VET teachers and students an online public communications site that supports the uploading and viewing of videos, as well as fulfilling the aims of institutions to design and increase the use of self-paced online learning. Webinars, recorded lectures, talks and YouTube presentations by industry experts and fellow students can be used to explore a subject in depth, while online quizzes and discussion boards can be paired with YouTube to test student knowledge and to give useful feedback. Moreover, teachers can access a description box in YouTube and report the addition of annotations to videos in order to link students to other online sites, useful articles and further videos they believe might be of value to them.

Importantly, as teachers and students emphasised, videos posted on YouTube can range from beginner quality to more professional videos. Thus, there are no barriers to VET students posting beginner quality videos, while more high-quality videos from other sources can be posted that might demonstrate the skills of an expert or a highly experienced professional. For instance, there is the option of accessing YouTube EDU, which features videos more suited to educational and training purposes. Other sources mentioned in the interviews included educational videos from bodies such as the Khan Academy, Stanford and TED-Ed.

YouTube has the option of setting privacy settings from public to private, such that videos are only shared with specific groups. The option of creating 'invite only' events and allowing the presentation to be watched only by fellow students also exists. In the vast majority of cases, VET student videos are being viewed only by their fellow students. However, there are some exceptions. A music student was allowed to have their performance viewed by their family and friends, the reasons being both personal (that is, to show parents and friends their growing competence as a musician) and professional (that is, to promote their skills to potential employers in the music industry).

Given that a video might be shown to fellow students and others, teachers noted that students are often very motivated to produce high-quality, informative and watchable content. Teachers also emphasised that watching the YouTube videos made by their students or the work of more skilled professionals promoted discussions in class or online and more collaboration and engagement among students. Teachers and students also reported that the process of planning a video, followed by its production, helped to improve both the generation and retention of new knowledge.

At the same time, teachers highlighted the need to set guidelines on the production of a video, including the maximum time required, complexity, length and resources (that is, using free image and editing tools). Teachers reported that some students became too engaged, being overly consumed by the design and creativity required to prepare their videos. Other students became too competitive, wanting to impress their fellow students with the quality, complexity and professionalism of their videos. The downside was that this competitiveness and the quality standards being set by some students made other students reluctant to make a video.

YouTube is playing a major role in the design and delivery of face-to-face and online courses to apprentices. For example, a number of apprenticeships are moving to a new model of online delivery to include face-to-face contact 'to cover theory or to gap fill'. For instance, in an advanced building qualification, a teacher described the integration of face-to-face

and online delivery, which included considerable use of YouTube, together with Adobe Connect, web conferencing and other forms of social media, depending on the cohort of apprentices. Where the Training Package in Advanced Building describes 'do a site meeting', the options now available to this trade teacher include having a face-to-face meeting at a site or going to an online room to run a virtual session that includes professional videos of a site meeting, either from the teacher's library or downloaded from YouTube.

Some VET teachers are preparing customised playlists of videos for their courses. Although some teachers felt a little unsupported in doing this, in other cases institutions are setting up video libraries with the assistance of teachers or support staff. Teachers and students frequently mentioned how students regularly view these materials to learn more about an industry or a job. Importantly, they see skills being performed often at the highest levels of competence in a workplace or industry. For instance, institutes have video libraries covering customer service (for example, managing conflict, handling guest complaints), video series on a product (for example, a new type of machine, a new cocktail), and videos that detail duties in the hospitality industry (for example, guest check-ins and check-outs) or common tasks in nursing (for example, the correct way to lift a patient from a hospital bed).

Facebook and VET courses

Facebook is a very popular social networking tool, and one that is increasing in its use in VET organisations. Despite the fact that Facebook was not created as an educational tool, it is increasingly used by teachers and students worldwide to share learning, content, materials and online discussions. Both teachers and their students emphasised that Facebook promotes this sharing and collaboration through its features, which include the capacity to establish Facebook groups and the inclusion of texts, posts and comments. In addition, it offers the opportunity to post diverse media such as links, videos, photographs, images, polls and file uploads. Teachers and students alike reported that Facebook offers opportunities for discussion groups, chats, private messaging, sharing, liking, highlighting and promoting. Teachers can also devise and use questionnaires in class, create polls to receive feedback about a course, request opinions on a specific topic and generate statistics.

Given these features of Facebook, a related question raised with teachers addressed the benefits of using the learning management system of the institute. Significantly, most teachers strongly emphasised the usefulness of an effective learning management system, one whose key benefits included the content being kept in one location, with any information required by students available in a direct and organised format. Having a centralised site of learning enabled content to be offered at all times from the same source and available to multiple users simultaneously, with unlimited access to the information being provided. A well-functioning learning management system also ensured more consistent delivery of the material for teachers, along with every student having the capacity to access the same content. Apart from issues related to centralising the source of learning, many teachers also cited the value of the system in keeping track of students' progress and ensuring they were meeting their performance milestones. Most importantly, the use of a well-designed learning management system means that the progress of students can be tracked and their records reviewed and accessed to investigate areas for improvement.

Teachers' personal familiarity with Facebook was a key driver for its use in their training courses.

However, despite the benefits of an effective learning management system, teachers knew that students were very attracted to the use of Facebook, often favouring its use over the learning management system. Asked about how she uses Facebook, a teacher in a community services program summarised the wide variety of uses as follows:

> I have set up my own class Facebook. I answer questions, deal with workplace enquiries, tell students about any jobs that are going, put up any material that might be needed for the workplace, put up additional things not on the learning management system, and answer questions about using the system. I find that students are pretty good with the accuracy of what they post, but where students give incorrect information, I can correct it.

As another teacher commented:

> Someone finds a video, let us call it 'ECG made easy', and so they put it up on the Facebook group with the link to the video, with any interesting diagrams. People watch it, we talk about it online, post comments and then when back in class I can take the discussion further.

The major benefits of Facebook mentioned in the teacher interviews are its accessibility, ease of use and being free. Almost all students are familiar with Facebook, have Facebook accounts and they regularly use Facebook to connect socially with their friends and family. In addition, most of the teachers interviewed use Facebook, and often this personal familiarity with this form of social media was a key driver for supporting its introduction into their training courses. Further support came through training in its use, provided by their institution, and support from other teachers who were championing its adoption. As one teacher put it:

> Without too much worry, I can assume that the majority of students in my class are Facebook users. They will know more about its use than I will, and the vast majority can be classified as efficient users, who know how to use its functions without too much additional prompting or support.

Another attractive feature of Facebook cited by the vast majority of teachers and students is the capacity to create a class Facebook group. Within the Facebook group, teachers provide updates, announcements, photos and videos. A Facebook group also creates a space for students to ask and answer questions. A number of students shared examples of how they had posted a question to the group's wall asking for help in answering a question. Students emphasised how quick and supportive replies from other students encouraged them to learn from others, sharing questions, insights or experiences.

Such collaborative learning is occurring even where some Facebook groups are as large as 800 students in the distance and online learning modes of delivery. Teachers believed that in these large online courses Facebook and other forms of social media are promoting greater sharing of different points of view, more questions and more discussion. In turn, these increased levels of interaction reduce feelings of isolation and impact positively on the levels of engagement among online and distance learning students. Due to its ability to connect all types of students with each other, social media is emerging as a dominant feature in the online and distance learning courses being delivered in VET at the three VET organisations studied.

At each institution there is overwhelming agreement that the use of Facebook is building more collaborative learning. Posting of comments and the opinions generated by posts are viewed by teachers and students alike as allowing a student to build their knowledge and understanding, not only through their own efforts, but also through collaboration with others. Evidence of this growth in collaborative learning is seen in the frequency of the postings made by online and distance learning students, the positive and supportive comments made about posts by teachers and fellow students, and the solid growth in the enrolments in these online and distance learning programs.

Students are supporting other students in the use of Facebook. Older and less tech-savvy students are encouraged and coached by younger students to set up Facebook pages and to join the Facebook group initiated either by their teachers or by students in their courses. A major outcome is the creation of more connectivity and improved relationships between all students in the course, despite the diversity in their ages, backgrounds and the stage in the qualification.

Facebook group connections are also occurring across different year levels within a qualification, such that Year 1 students in some qualifications are connected with Year 2, 3 or 4 students. These connections with their virtual classmates, when managed well, are creating a more open exchange of ideas, advice and support to learners. One nursing teacher summarised the value of Facebook:

> I really do see a lot of sharing across groups. I have younger students who tend to be poor time managers and older ones who are more organised. The younger ones freely talk about their feelings and emotions, and these emotions need to be managed in the Facebook group. The older ones are less about emotions and more about wanting and sharing information. In the end there is a lot of sharing of information between the older and younger students, and in a few classes I also have good communication in the Facebook group between students in different years. It creates a lot of peer support and encouragement, especially when things are not going too well in an industry placement.

Facebook is being introduced into VET courses in three ways. Firstly, in some organisations an institutional Facebook page is established (for example, OTEN) and monitored by the organisation, which is used by teachers and the online and distance students. Secondly, Facebook pages and groups are being set up and administered by VET teachers. These teachers are often involved in courses with a focus upon people, communication, building relationships with others and the delivery of services (for example, nursing, social work, community services). The use of Facebook and its numerous tools for sharing, communicating and working in teams aligns well with the aims of these courses. Teachers set up their own class Facebook groups, which are closed and only accessed and used by students in the course. Typically, there are checks associated with accessing these Facebook groups, including entering student identification or enrolment numbers. Thirdly, students set up Facebook pages for a course and invite other students to join. While it might be assumed that one student sets up a Facebook group for a single course, this is not necessarily the case. For instance, there are also Facebook champions among students (as well as teaching staff), including one student who setup 20 Facebook groups while also supporting other students in setting up groups for other VET courses.

VET students set up Facebook pages for a course and invite other students to join.

An interesting dynamic is emerging among teachers across the three institutions, in terms of their responses to students setting up Facebook groups in their classes. In some cases, teachers are invited by students to join the Facebook group, and they do. In other cases, teachers cite their interpretation of the institute's policy, which states that they should not join student-initiated Facebook groups, so they do not. Where teachers accept a student's invitation to join the Facebook group, they ask either to share the administration of the Facebook group with the student, or, with the agreement of the student and the class, they assume the sole administration of the class Facebook group.

The ideal is that teachers assume the management of the Facebook group, thereby providing more regular monitoring to check that the institution's policies relating to privacy, intellectual property and confidentiality are being followed. Also, some student-inspired Facebook groups are not inclusive of all students, and so the teacher grants access to all students in the class. A teacher recounts their experiences as follows:

> We often have large groups of 30 nursing students. We have face-to-face three to four days a week, then supervised placements and students need to be regularly communicated with, updated and debriefed. So I am motivated to find ways to stay in touch with this large group of students and also across classes and placements. In 2015 two of the students set up a closed Facebook group, and I asked to be invited, they thought about it, and I was invited to be part of the group. It is a place where we can share information and students talk to each other. Besides the classroom it is also another place where students can debrief if they have seen a tragic day in a placement. I have not set up a Facebook page myself, and will possibly continue to do what we have done in the past, letting students determine its value to a class or not.

Interestingly, even in the same institution, teachers offer different interpretations of their institution's policies on the use of social media. In one institution, teachers report there are no students setting up Facebook groups, while in other qualifications at the same institution it is considered to be very common. In one institution some teachers joined the Facebook groups set up by their students, while other teachers made it very clear that they do not or never would join. In instances where teachers join the student-initiated Facebook group, teachers believe that there is more engagement and connection between teacher and students. In other instances, teachers report that the class Facebook group either shuts down or its use declines significantly once students know the teacher has been invited into their Facebook group.

These same mixed messages emerge in how teachers view the support by their institution for the use of social media. Some teachers within the same institution believe that their organisational policies do not support the use of Facebook in courses, and so do not set up a class Facebook site or support students setting up a Facebook page for their course. Other teachers at the same institution believe that the policy supports the use of Facebook and other forms of social media, and so use the Facebook groups they or their students set up. Other teachers, although they believe the institute's policy is not very supportive of the use of various forms of social media in VET courses, still go ahead with using their own Facebook or cooperate with students to use a Facebook group set up by them. To these teachers, the benefits to students associated with greater levels of support, connection and sharing outweigh what they judge to be a set of organisational policies not well attuned to the needs and preferences of today's VET students.

Another issue is the choice between using the institute's official learning management system or Facebook, or a combination of both. Facebook offers many of the features of the various learning management systems (for example, Moodle, Edmodo, Blackboard) used by training organisations, especially in its ability to organise materials, share information and to record possible evidence on the achievement of a competency (for example, posting a photograph or video). Many of the tools in Facebook that allow the posting of notifications of upcoming deadlines, assessments and industry visits are also features of the learning management system.

Students are more likely to be watching and reading their Facebook accounts than the official forms of communication by means of the learning management system. As a result teachers have more success in keeping students updated about upcoming events by using Facebook rather than the official learning management system. Although these systems have many of the same features as Facebook (for example, teachers can place materials on the system, host discussion boards), the learning management systems are not seen by students and by some teachers to be as accessible, interactive and enjoyable to use. Compared with Facebook, the learning management system is perceived to be more difficult to learn and to use, less flexible and, as many students put it, 'less fun'.

Teachers who are strong advocates for the use of Facebook and other forms of social media emphasise the match between the features of Facebook and the learning goals in their courses. For example, in terms of achieving various learning objectives around working together and valuing diversity, Facebook encourages communication between learners and the sharing of information, irrespective of the source. At its most basic level, Facebook is used by teachers to keep students informed about their course, including any changes to schedules and information about industry events or placements outside the class (for example, the time to be at the outside venue; the need to wear a uniform; the requirement to bring certain resources for the day). At its highest level of use, Facebook is being used in highly effective ways to promote a more expansive set of goals relating to the value of individual diversity, knowledge sharing, cooperation and learning communities.

On the other hand, there are negatives with the use of Facebook and Facebook groups. In particular, there is the risk that Facebook becomes the default learning management system, operating outside the system used by a training organisation. Typically, Facebook is not connected to the learning management system. As a result there are risks when students fail to use the learning management system to access important information and to submit official material or assessment. Critically, it is the learning management system that records all of the information required for audits. Key information can be lost to teachers and for audits unless teachers are vigilant and copy materials across from class Facebook groups to the learning management system.

As teachers emphasised, the use of Facebook as the default learning system also means that they do not really know what types of information reaches their students. Furthermore, the information on a student-initiated Facebook group might not be fully aligned with the content, objectives and goals of the course. Unlike the learning management system, Facebook is not designed for mapping the progress of learners.

In addition, Facebook lacks the security of the institution's learning management system, which is superior to Facebook in reducing fraud, virus attacks, online scams and potential identity theft. Some teachers report that their students are unaware of the privacy issues that need to be managed when using any form of social media and, unless it is

There is a risk that Facebook becomes the default learning management system, operating outside the system used by the RTO.

demonstrated to them, they do not understand or use the privacy settings, for example, in Facebook. Many teachers also commented that students are unaware that, unless there are privacy settings, a potential employer can view a student's Facebook page as part of an initial screening-out of job applicants.

When a teacher uses the institute's Facebook for their classes or teachers assume control of a Facebook group, many of these issues around privacy are resolved. In a closed group, students enter only by invitation. Others outside the class are unable to see the contents, discussions or posts inside the group. For instance, institutes require a correct student number to be recorded by the student to gain access to a classroom Facebook that operates only as a closed group. Teachers and administrators are encouraged to manage privacy settings and to delete inappropriate or accidental posts.

Again the advantage of teacher participation in the Facebook group is their ability to take preventative actions to minimise the likelihood of such events. Teachers report that they hold classroom discussions at the start of a course to establish appropriate rules of behaviour. These rules are explained in terms of the protection they give to individual students, as well as to the reputation of the institute. As summarised by one teacher:

> I make the students aware of the institute's policy and we set up rules around confidentiality, especially that patients' names or related confidential information is not disclosed. I am also there as an administrator to check that the pages are managed correctly.

Students who join a classroom Facebook page supported by the institute are provided with a disclaimer that states the institute's policy on the use of social media. This disclaimer includes agreeing not to post false or misleading information. In addition, students are encouraged to alert teachers and course administrators if they come across inappropriate posts, blogs, wikis or similar communications.

A major disadvantage of Facebook, particularly in the opinion of students, is that it can waste a great deal of time and be highly distracting, an issue especially relevant when the materials are already better presented and more readily available on the learning management system. Students report that they found themselves being distracted by browsing pictures, watching videos and reading posts on a range of issues not particularly relevant to their courses. Furthermore, students mentioned being distracted by the inappropriate comments and posts by other students in their classes. Also, a few teachers and students raised concerns that some students use Facebook to enable them to be 'spoon-fed, as they are lazy'. This annoys other students and if not well managed, it is seen to reduce the take-up of discussions and debates in class and online.

Another issue is the possibility of conflict and cyberbullying through an unofficial Facebook page, set up by students for their class. A frequently cited example is the situation where students do not like each other, and post their views about each other on the class Facebook pages. Another frequently reported case is where a student posts comments about themselves and how they feel. These posts are viewed as inappropriate and may be linked to the student going through a period of anxiety, depression or low self-esteem.

Other forms of social media used to deliver VET programs

Students use blogs to reflect on lessons or field trips, document research for a class project and illustrate their thoughts with photos or videos, a practice that also promotes their writing skills. Like other forms of social media, connection between students is enhanced as they can read each other's blog posts and communicate shared experiences and reactions. Teachers report setting up team projects, whereby several 'student bloggers' collaborate within a group and publish different parts of the finished paper on each blog. A blog can also serve to highlight the on-the-job learning or placement experiences of students. An example was a blog by a VET student group who visited China and, in cooperation with the institute's marketing group, the students wrote a daily blog, also uploading links and photographs, which were shared with other students, family and friends.

Again, with blogging there is further evidence of differences in social media preferences by the type of VET student. For instance, in talking about blogs and bloggers, some teachers believed that blogging was more appealing to VET students with higher levels of reading and writing skills. In particular, they believed that blogs are less popular as a social media tool among trade students due to the higher demands on their writing skills. Also, the more senior teachers responsible for driving innovations in learning and assessment reported 'teacher hostility' and 'poor digital literacy' as the key reasons for the limited uptake of blogs. Teachers could not see the benefits and were unwilling to give the time to write and to manage blogs.

Teachers and students mentioned some use of Twitter. However, Facebook offered many more features that supported training, making it a more popular choice. Twitter does allow users to create profiles, upload photos and video, and to add other users as friends and exchange messages. As with Facebook, it is an effective way to post class announcements, reminders and updates about class field and industry trips. Some students were accessing the Twitter chat feeds of experts in a field, and sharing these links and interactions with teachers and students. On the downside, there were examples of a student or a small group of students privately messaging a teacher about an issue, but not communicating to the larger group of students. Here teachers advise students not to post private messages but to make the query known to the larger group of students. Reflecting on similar examples or misunderstandings about the appropriate use of social media, teachers also mentioned that once told, students were very quick to learn the appropriate protocol about messaging and what was appropriate content.

Teachers and students reported limited use of Instagram and LinkedIn. For example, a class Instagram feed showcased students' work by featuring their artwork and images collated around a specific theme. In a competition called 'what study space looks like' students used Instagram as an engagement tool. As another form of social media, LinkedIn provides a business and employment-oriented social networking service, which operates via websites. LinkedIn is being used to promote a LinkedIn alumni group in some institutions and their courses, but with little uptake.

Finally, across the three institutions, there was little reported use of Instagram, Tumblr, Pinterest, Edmodo and Wordpress. Typically, they were trialled, and while students found a tool visually engaging (for example, Instagram) the take-up rates were too low to continue. None of the social media tools discussed above (that is, blogs, Twitter) achieved the same levels of uptake and student engagement as did Facebook groups and YouTube.

Student-initiated use of social media

The frequency and motivation for VET students setting up Facebook groups for their class has been mentioned earlier. In summary, in their social lives VET students are major users of numerous forms of social media. As a result, they see the benefits to their training through being better connected and being able to request, share and discuss information relevant to their training with other students and their VET teachers. While a minority of students are more reluctant users of social media, these students can be encouraged to engage with its use in class or online. At the same time, other students who are major users of social media refuse to use the social media promoted by their VET organisations. They wish to keep their personal lives and their VET training as separate as possible and oppose the intrusion of educational and training organisations into their private social media world.

As noted earlier, we know that Facebook groups are being introduced into VET courses by students, with or without the permission of their teachers, and may be aligned or not with the policies of their institution. Students are well intentioned and set up social media in their VET courses, as they want to build connections with others and share useful information and knowledge. Where teachers are made aware of the Facebook page set up by their students, they make a range of decisions, including, in the majority of cases, asking to join their students' Facebook group and being invited to share or take over the administration of the Facebook group. When teachers are not invited, as long as they continue to hear that the Facebook group is being used positively to support and to share, on the whole they permit its continuation.

Another major motivator among students for introducing social media into their VET courses is to enable them to be more job-ready. Many students gave examples of how social media is a dominant feature of work in their future professions, including in jobs relating to people, planning and teams (for example, nursing, community and youth work) and for roles in the media, marketing and communications (for example, marketing, business, real estate, web design, information technology). In a real estate program, for example, students videotape themselves running an auction with their family and friends and upload the video to their own YouTube account and forward a HTML link for assessment. These same links can be shared with a future employer.

No teacher reported that they had asked their students to close a Facebook group set up by students for their class. However, it was very common for VET teachers who joined an existing Facebook group established by their students to assume its administration as a closed site, and, moreover, to discuss with their students the various rules of behaviour around its use. These rules or expectations were closely aligned with institutional policies on privacy, intellectual property, codes of conduct and protection of the reputation of the institution, in line with a 'common-sense approach' to the use of all forms of social media.

Differences among VET students in their social media preferences

Different forms of social media appear to be attractive to different types of VET students. The VET qualifications that require students to develop an ability to work and cooperate with diverse people in teams (for example, marketing, business, events management, social work, community work and nursing) seem more likely to incorporate Facebook and Twitter into their VET courses. Importantly, these forms of social media are commonly used in these

industries and familiarity with their use might be critical to gaining future employment. As described by a nursing teacher:

> Nursing is about talking to each other, coordinating and communication. In nursing you need to work as part of a diverse team, and Facebook with its focus on communication and interaction is a good match. It gets people talking to each other from different experiences, abilities, and age groups.

Apprentices across a wide range of programs are major users of YouTube. This usage included downloading videos from the World Wide Web and YouTube, as well as making their own short videos to demonstrate a skill at work. Teachers attributed the preference for YouTube among trade apprentices to their 'hands-on practical skills' approach to their jobs and the 'stage-like, problem-solving process in delivering a skill and completing a task', their jobs being more focused upon completing individual tasks rather than gaining the cooperation and support of others.

Another factor at work in the uptake of social media is general confidence in and the ability to use social media. Even within the same qualification there were differences reported by teachers. One teacher, for example, had considerable success with the introduction of Facebook to students in diploma and certificate IV courses in community services. However, as this teacher reflected:

> My Certificate III students are a different demographic. They are much less confident and do not seem to show the same technical skills. They are much less active users of the social media options that I try with them.

Again at the risk of generalising and stereotyping, information technology students perceived Facebook as a social media for interacting with their friends, but not for use in their professional roles. Facebook did not meet their needs to be able to capture, report and hold more technical communications. Being a competent user of Facebook would not help them to get a job in information technology. In addition, the use of Facebook for VET courses 'crossed the line', being 'an invasion of my social world'. Rather, as a teacher explained, the use of wikis and blogs are more suitable for developing the reporting skills that will be required by students when they seek help desk and similar roles.

Views of employers

While noting that this is a small and unrepresentative sample of employers, these employers, like the VET teachers, were highly supportive of the use of social media for multiple purposes, including training. The vast majority of employers interviewed were running small-to-medium enterprise businesses. Like many VET teachers who had engaged with social media in training, employers were also advocates of its use. All reported being personal users of Facebook, many regularly viewed YouTube and a smaller number had Twitter accounts. Facebook and Twitter were used by employers predominantly for personal and family reasons, and a few of the larger firms had Facebook accounts for marketing and communicating with their clients.

These employers were overwhelmingly strong advocates for the use of social media. They were impressed by what they had seen or heard from their apprentices or trainees about its use by their local training organisation. In particular, they were pleased with the quality of the online materials being used and the integration of numerous forms of social media to engage and regularly communicate with their apprentices or trainees while they were on

the job. Employers had no major issues about their employees accessing social media while on the job, as long as the reasons for accessing a YouTube video, a Facebook group or Twitter were explained to them (the employer). In addition, employers understood that students are encouraged to comment on posts, to give feedback and to ask follow-up questions. Looking at Facebook sites, they could see that VET teachers were monitoring these posts from the workplace, adding comments, and possibly asking for more information or posing further questions for the class group. Employees liked the use of a series of photographs or videos to show the development and demonstration of a skill and the hands-on nature of the feedback, even though it was online.

Employers talked about the sense of pride among their student employees in being able to share their good work and newly acquired skills with other students. Further, some VET teachers were delivering training in the same qualification across numerous regional locations and multiple year groups using a combination of a self-paced approach and block release. Postings of photographs or videos not only created more collaboration and support among apprenticeship students in a specific year, but also across all apprentices in the qualification, despite their differences in year groups and locations.

Employers particularly emphasised the advantages relating to the administration of training and how social media, with little disruption to their workplaces, was useful for reminding students about certain deadlines, dates or submissions. As a result, employers believed that the frequent transitions between work and TAFE went more smoothly, with less disruption and less downtime in production. As small operators, they welcomed any strategies initiated by the training organisation that reduced the time away from the workplace.

Employers noted that there was a frequent use of mobile phones by their students at work. Students were taking photographs or shooting short videos, which were sent to their VET teachers. Students reported that this photographic or other evidence had in earlier times been sent from the workplace as attachments for uploading or from block releases and passed on to teachers using USBs. Now they post photographs and video evidence directly onto the closed Facebook page of their class. One example provided by an apprentice carpenter was concerned with hanging a door. He could watch experts hang a door on YouTube and then upload photographs of his work as he hung a door. Once loaded onto a closed Facebook wall, the teacher and other students would comment. What employers liked most about this process was that the time spent at the training organisation could be used to attend more to 'the theory', 'focusing more on gap-filling around knowledge' and 'to explore alternative approaches to completing this task'.

Employers mentioned that their apprentices or trainees were showing them the comments and feedback from their teachers and fellow students at work. As a result, employers believed that that they were more up to date and more involved in the progress of their VET students' training. Furthermore, being more aware of the gaps that a VET teacher had noted in a posted comment, they were potentially better able to design opportunities and tasks on the job for students to practise a less-developed skill. Also, where a skill was well established, they could investigate other tasks on the job.

One downside reported by a few teachers related to the use of photographs and videos. The issues associated with the latter were discussed earlier: YouTube posts can be too elaborate, take too much time and students become too competitive. As for the use of photographs, teachers noted that some students either took too few or too many photographs using their mobile phones. Taking too few photographs was often linked to VET

students not wanting to use up the downloading capacity on their mobile phone plans for work versus their personal interests. Teachers noted that the practice of taking too many photographs was mostly managed over time, as students became more aware of what other students were posting and sharing.

In summary, the overall benefits of the application of social media to VET training as suggested by employers are very similar to those cited by employers on the general use of online and e-learning. This small sample of employers frequently mentioned the advantages of employees spending more time on the job, having more time for workplace training and assessment, spending less time away from work and completing their training more quickly. As a consequence, these employers, in typically small-to medium-size firms, believed that the training was less disruptive to their production goals and better integrated and customised for the skills needed for the workplace, with any time in training more efficiently used for gap training. The online feedback provided by VET teachers gave employers a better understanding of what their employee was doing in their off-the-job training and how, as the employer, they might be better able to coordinate opportunities on the job with the VET teachers to close skills gaps.

Impact on students' levels of interest, engagement and completions

Qualitative evidence on impact

As reported earlier, many VET teachers believed that the use of social media was resulting in more engaged students and higher levels of completions. Their data were anecdotal and based on their perceptions and observations over time; they were making comparisons or 'gut hunches' of differences in the completion rates of VET students where social media was and was not used. However, other teachers were much less enthusiastic, reporting that they perceived no real improvement in grades or completions. Alternatively, many of these same teachers did agree that Facebook groups, YouTube links and feedback from the posts of teachers and other students in particular were assisting students through 'more grounding, and more preparation', and 'overall I think they are just better prepared for each day'.

Teachers argued that the specific features of the various forms of social media were linked to the success in building increased student interest and engagement. For example, teachers believed that the task of having to plan, take and post photographs of a successful on-the-job task encouraged students to think more about the connections between their on-the-job learning and their off-the-job learning. As one teacher said:

> Students have to plan the posts and what they will put up. They see the comments by other students and the teachers about their posts. There is also some quite healthy competition in the group. The feedback helps them to see the connection between the theory at TAFE and the practical skills they are developing on the job. It also makes them self-assess and reflect on how they are advancing. This also builds their connection and support from other students, and helps to keep them motivated and engaged.

Having to arrange work tasks that need to be captured by photographs or short videos also engaged their employers. As noted previously, employers were able to play a more significant role in connecting the on- and off-the-job activities and became motivated when shown the positive posts by other students and the teacher about a workplace activity by their students.

Some teachers associated improved attendance with the use of social media. In particular, Facebook and messaging students were resulting in improved connections with their students, increased levels of attendance and higher rates of completion. Students were using Facebook to report any delays in coming to class to their teachers. In response, teachers would encourage students to try to come to class, even if they were late or had missed part of some instruction. The relationships and connections built in the Facebook group between students and teachers motivated students to keep their teachers more informed. In turn, these stronger relationships allowed teachers to be more explicit in encouraging attendance, despite delays or personal problems. Also, shyer students and those with significant personal or emotional problems used Facebook to communicate with teachers, avoiding the need to approach a teacher before or after class. As a teacher put it:

> These are the students other students might label as asking the 'dumb questions', if these questions are asked in class. Facebook helps me to manage this issue and it does encourage these types of students to be more willing to approach me.

Other evidence on impact

To date, only a few VET institutions have attempted to study in a more quantitative way the relationship between the use of social media and outcomes such as increased levels of engagement, improved attendance and higher completion rates. However, a few VET teachers have attempted to look at such data or collect relevant records. Here we present three such examples.

At Federation Training, one teacher examining local data on social media identified a six to seven per cent increase in attendance rates in their courses over a period of three years. These are not likely to be causal findings but may be associative.

A second example came from Open Training and Education Network, where Paul King from OTEN recently produced an NCVER Community of Practice paper (King 2016). In an attempt to investigate in more detail one of the aims of this current study, that relating to social media and impact, this study sought permission to use the data from the OTEN study. A strength of the King data is that few studies on the impact of social media and using quantitative data exist. However, the paper needs to be viewed as exploratory due to the small sample size. Furthermore, the nature of the data and analyses do not allow for the investigation of causal relationships.

The community of practice paper describes a small-scale quantitative study on the impact of social media (that is, OTEN Facebook groups) on improving students' engagement and completion of distance and online education across three different OTEN courses. As background to his paper, King (2016) observed that a high percentage of OTEN's enrolled students (29% of the student population) are on the OTEN Facebook pages and groups. In addition, prior work at OTEN, including a small 2012 survey, revealed that 46 of 54 surveyed students (85%) believed that the use of social media would assist them in completing their course. Also, 36 of 45 students (80%) reported that engaging in social media through the

OTEN Facebook page reduced the number of queries they made by email and phone to their teachers. This previous work at OTEN also found that fewer queries were raised, as students could view a response to their questions or a teacher's response to other students' similar questions on the Facebook page.

The King (2016) study used data from OTEN's Student Administration Management database. All students were distance and online learners from three different courses: accounting, business administration and workplace health and safety. There were a number of reasons for the selection of these courses, chiefly that Facebook groups in the courses and units had operated for over a year, and there was evidence that students were actively engaging with each other in these groups; and secondly the three courses selected did not have a related Moodle[1] forum set up in the Moodle learning management system. The accounting and workplace health and safety Facebook groups had teacher guidance and input, whereas the business administration diploma qualification did not. It was up to the individual student whether they participated in the Facebook groups or not, and accordingly the number of students involved in the Facebook groups was much lower than those who were not.

Table 1 reports on the results from comparisons of these data for students in the Diploma of Business Administration, Diploma in Workplace Health and Safety (WHS) and the three accounting units. The key points of comparison are the completion rates (percentages) for the total non-Facebook students and the completion rates for the total Facebook students (percentages). Combining the three samples, the completion rate for students who were not in Facebook groups was 15%, while the overall completion rate for students in the Facebook group was 27%. King (2016) proposes that these higher completion rates in the OTEN courses where Facebook groups are used could be indicative of students' higher levels of engagement in their studies. Also supporting this, as noted a number of times in the current research case studies, Facebook and Facebook groups were seen to provide an additional medium for students to collaborate with each other and to engage more fully with the course content.

Higher completion rates in courses that use Facebook groups could be indicative of students' higher levels of engagement in their studies.

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1   Moodle is an open source software online learning management system. It is often used for blended learning, distance education and e-learning projects.

Table 1 Unit completion rates of Facebook and non-Facebook groups in business administration diploma, WHS diploma and accounting units delivered by TAFE NSW OTEN[1]

Unit Number	Total non-Facebook students	Total non-Facebook completed	Percentage completed non-Facebook	Total Facebook students (2–12 months)	Total Facebook completions	Percentage completed Facebook
Accounting	19 499	1948	21.5%	357	113	36.5%
WHS	16 921	1230	7.0%	1105	211	19.0%
Business admin.	6979	1012	15.0%	865	210	24.0%
Total	**43 399**	**4190**	**14.5%**	**2327**	**534**	**26.5%**

Note: 1 Students chose whether they participated in the Facebook groups or not, and accordingly the number of students involved in the Facebook groups was lower than those who were not.

Source: King (2016).

In addition, there was evidence that teacher input into the Facebook groups possibly promoted more focused and course-specific discussions, which in turn contributed to the higher completion rates. The data showed higher rates of completion for Facebook courses (accounting and workplace health and safety) with teacher guidance, compared with courses that did not have this teacher interaction (business administration diploma).

There do appear to be some associative benefits between the use of Facebook groups and course completions. However, some caveats should be applied to these findings, as other aspects may affect these completion rates. For example, the profiles or characteristics of the two groups may differ; for example, there might be more disadvantaged students in the non-Facebook group.

Another source of information came from the current project. After the small group discussions were held in class, all 70 students from the three institutions were asked to complete a short questionnaire to give 'yes' or 'no' answers to four statements. The focus of the short survey, as with the King (2016) study reported above, was upon the fourth research question and the perceived impact from the use of social media on the levels of student engagement, participation and completion rates. In total, 42 of the 70 students (a response rate of 60%) completed this short survey. Table 2 summarises the survey results. There was agreement among these responding students that the use of social media encouraged them to be more engaged and interested in their training, while they were also learning from other students. However, while still high at 71%, some students (29%) were less likely to link the use of social media to quicker completion of their training.

Table 2 Short student survey on attitudes about the outcomes in using social media

Statement	Percentage (Yes)	Percentage (No)
The use of social media has helped me to be more engaged in the training	95	5
The use of social media has made the training more interesting	90	10
The use of social media has helped me to learn more from other students	95	5
The use of social media will help me to complete the qualification quicker[1]	71	29

Note: 1 While completing a qualification more quickly was not raised in the literature review, this question was included in the short survey as it relates to completion rates and mirrored the King (2016) study.

Social media, assessment and institutional audits

Discussions are increasingly occurring about the use and applicability of social media for the purposes of assessment and audit in the VET sector. As a result, a third and final issue examined in the current report is the attitudes to and use of social media in VET assessment.

Assessment

As to be expected, there are always various trade-offs associated with any form of assessment. These trade-offs are linked to situational factors (for example, the ease of use of a new technology), institutional attitudes and practices (for example, attitudes and support for the use of technology to support assessment, rules about evidence) and dispositional issues (for example, attitudes of learners, teachers and employers to the use of new forms of assessment). Together, these factors, along with many others, shape the uptake and sustainability of any new technologies that might be introduced to VET programs.

Significantly, there are real risks to the reputation of individual VET institutions and any training system where these trade-offs are not managed well. The Australian Quality Training Framework (AQTF) provides a set of nationally agreed quality assurance arrangements and guidelines for the training and assessment services delivered by training organisations. AQTF auditors use these guidelines as a reference when evaluating the assessment arrangements employed by an RTO. For instance, we know from prior studies in Australian VET organisations (for example, Callan et al. 2016) that the use of technologically enabled assessment does raise challenges to assessment practices and procedures, the validity and reliability of assessment, authentication and the need to train and develop staff involved in these new forms of assessment.

In addition, according to many teachers interviewed, there are few, and possibly no, training packages where the use of social media is recognised, including its potential in the design of sound assessment. As one teacher concluded: 'Currently there is a lack of any good advice and procedures about how social media might be better incorporated into our assessment practices in VET'.

Based on the interviews and small group discussions with students in this study, there is little doubt that social media is emerging as a useful resource for VET teachers and students in preparing and completing various pieces of assessment. Students report that the use of social media often enables them to receive very prompt and supportive assistance from their teachers and fellow students. Often this assistance is in the form of advice about a problem relating to a piece of assessment. Feeling more connected to their teachers and other students, they also report being more confident to ask for advice, information and support about their VET assessment.

However, one downside cited by a few teachers is that this 'collaborative climate' leads some students to put in less effort for their assessment, including plagiarising the work of others. Less motivated students, who know that they will be assisted by fellow students, are not expending the expected personal effort to complete a piece of assessment by themselves. Also, where social media is used in some form in a piece of assessment, issues about authenticity arise. That is, there were some concerns that the submitted work was the actual work of the student. However, as with any type of assessment, teachers

emphasised that they are always very focused on the need to manage and check that any submitted online assessment is the work of the student.

Audit

A large number of teachers have been through successful audits in which social media was a part of the materials and evidence they had gathered to present to auditors. In general, all of the materials shown to auditors were hard copies printed from the learning management system. In a few cases the teacher sat with the auditor to show them online on the learning management system how a unit was assessed for individual students, explaining the online assessment tools, online resources, training packages and mapping. The auditors were shown the materials captured on the institute's learning management system by the various forms of social media (for example, wikis, blogs, discussion boards). In addition, they were shown online or shared copies of screenshots transferred by teachers to the learning management system from discussions recorded in the Facebook groups, on wikis and blogs, and photographs and YouTube videos. The views of a number of teachers about the audit of their uses of social media in their VET course assessment are given in the following quotes:

> In two units we used wikis as evidence set up in the learning management system Moodle. We also showed to the auditor an archive we had set up of the wiki spaces set up by the students.

> It is a small part of my assessment in community services. For example, in an e-advocacy project I ask students to pick a social issue, research the topic, and to design an e-advocacy online strategy that might use one of the social media platforms like Facebook, Twitter and Instagram. This is important as in their roles in human and youth services they will need to advocate to a number of different audiences that we know are best reached through the use of social media.

> I have been through a recent audit. The auditors really liked it. I had a record on Moodle of screenshots from Facebook groups showing various forms and types of student contact. The auditor liked the photographic evidence and real-time feedback to students, with posts showing the time and date for the records. Where I had replied to a complaint or a technical question that was made on Facebook, I have put screen shots on the learning management system.

> I showed them hard copy photos and screen shots and put all of the social media materials in a course folder as hard copies, paper evidence, together with the usual things they expect to see such as course guidelines, checklist forms and practical evidence on the institute's learning management system. If I had answered questions on Facebook, I had added that comment back on the student's record and the learning management system, and had sent an email to the student and recorded their reply onto the system.

When it is used for assessment, social media is at best a small part of a larger assessment task. For example, one teacher explained how she set an assessment task concerned with exploring with students how a person can write differently across a range of communication channels, including Facebook, wikis and a hard-copy reflective journal. In the assessment, students investigated the differences in the writing of English in terms of the level of formality, grammar, spelling, style and other features across the three forms of communication. This material was later shown in a successful audit.

A number of consistent themes about social media and assessment emerged across the teacher interviews. Firstly, teachers had been careful to upload the social media from a

Facebook, wiki or blog onto the learning management system. Secondly, auditors are happy to accept materials from various forms of social media, but in managing the use of social media for evidence in an audit, teachers only present these materials either as hard copies or online from the institute's learning management system. This is well illustrated by one example from a music teacher who described her experience with an audit:

> I never had to show the video or YouTube of a performance to an auditor. They never want to see the actual performance on video. They only wanted to see the paper records from the learning management system that showed the type of work, the assessment, handouts, links, and anything that I might show or use in class.

In summary, social media is rarely being used as an assessment tool in itself. Many reasons were given for this, including: the lack of institutional support for the use of any evidence gathered from outside the learning management system; a lack of technological support for teachers wanting to use social media, including little formal training; the conservative attitudes of teachers towards the use and experimentation with new forms of technology; the current lack of development in training packages of the use of social media for assessment; and the move towards the creation and use of centrally developed courses prepared by teaching teams, thus reducing the opportunities for individual teachers to design social media into their pieces of assessment.

When presenting social media as evidence for audits, teachers either do so using hard copies or material from the institute's learning management system.

⚖ Concluding comments

Contributions

As noted in the introduction to this report, the literature is at best emerging, with numerous small-scale reports, some mildly empirical and other more qualitative studies, presenting all the various learning gains and benefits from the use of social media. These studies and reviews of them (Tapscott 2009; Tadros 2011; Tess 2013) reveal that the vast majority of students do have a social networking account. The key message from these initial studies is that access to social media builds opportunities for improved relationships with fellow students and teachers. In addition, students report higher degrees of autonomy, more choice and freedom of expression and improved outcomes. These improved outcomes include more collaboration between students, more engagement in learning, and increased enjoyment of their education and training programs. Overall, the current study, though small-scale and qualitative, supports these findings.

The findings of this study with VET students and teachers also supports past research on the preferences of higher education teachers and their use of social media. In a major survey of a United States higher education faculty, Moran, Seaman and Tinti-Kane (2011) report very similar findings to those in the current study; that is, teaching staff are increasingly aware of the major social media sites; many have used a social media site recently for their personal use; the use of social media in their personal lives is a major motivation for exploring its use in their VET organisation; and social media sites are judged to be valuable tools for collaborative learning. Very similar to the findings of the Moran, Seaman and Tinti-Kane (2011) study is the finding that online video is by far the most common type of social media used in class and posted outside class, or assigned to students to view. Next is Facebook, followed some way by the use of blogs, wikis, and Twitter.

Implications for practice

As with many previous new technologies, as some observe (for example, Selwyn 2011), the discussion and debate about the utility of new technologies, which include social media, are largely speculative rather than well informed. VET educators need to work through the considerable expectations and possible exaggeration associated with the benefits of social media to find uses that best suit their teaching needs and those of their VET students.

However, what is increasingly being understood by VET teachers and their training organisations is that the students who are taking up VET qualifications are already highly connected and very active learners who are willing to explore. They are not the passive consumers of VET training of the past. The use of new technologies is highly compatible with their lifestyles, preferences for how they want to interact with their world, including more control over what they do, as well as where, when and how they do it (see Selwyn 2011).

A significant finding is that social media usage emerges as highly compatible with the growth in online and distance learning programs by VET institutions. The coincidental growth in the use of social media in these areas over its use in more campus-based programs is possibly explained by the nature of distance learning models themselves in that they are potentially more attuned to any trends and technological advances that might promote

improved communication with students, better engagement and a more enhanced learning experience. Teachers are also working with students who, based on their greater technical competence or learning styles, may have self-selected to use online courses as their preferred method of training.

Significantly, VET organisations are well aware of the potential downsides of offering more fully online and distance learning, one being that students may develop a sense of isolation from their teachers and other learners. The use of social media, in particular Facebook, is proving to be a major tool for creating a strong sense of connection and support.

However, the use of social media is not without its challenges for these VET organisations. Many champions of the use of social media were interviewed for this study, but they are a minority within their institutions. Many VET teachers have yet to be convinced of the benefits of using social media, citing the time required to set up and manage videos, podcasts, Facebook pages and wikis. Associated with this is the need for increased efforts by VET institutions to clarify and communicate their policy positions on the use of social media, their support for training, and the ongoing technical support available to maintain and increase the potential uses for social media. We know from prior studies on efforts to sustain the innovative use of e-learning (Callan & Bowman 2010) that support for staff and students is a critical factor in promoting sustained and meaningful use of these new technologies.

In addition, the VET industry needs to provide forums with the capacity to stimulate debates on how best to use social media and other technologies in ways that will deliver more realistic outcomes. Training package developers and regulators also need greater representation in these future forums than they had in the current study. At present, there is the real risk that VET teachers are being misled by some of the hyperbole and the associated long list of benefits flowing from social media adoption. If we accept that often the most successful changes in teaching practices occur as the result of more incremental rather than transformational changes, then a related question is how the majority of VET teachers who still use more traditional approaches to training and class interaction might integrate some aspects of the new technologies into their current teaching practices. Institutional support, training and clear guidelines on how social media can be used in teaching and assessment and associated audits will go some way towards addressing this.

Future research directions

VET researchers can play an active role in contributing to this debate by designing and completing larger-scale and more longitudinal studies of the impacts of social media on VET learners (for example, on levels of engagement, attendance, satisfaction and completion) where it is used in their training. The current study has a number of shortcomings that need to be addressed in studies that might investigate the topic of social media in Australian VET organisations. Firstly, the findings of the current study are based on a non-representative sample of teachers, students and employers. Larger studies with more representative samples are required, including gaining the views of those in private provider organisations. Secondly, the current study has provided at best a very preliminary investigation into the links between the use of social media, student engagement and student completions.

There is a need for increased efforts by VET institutions to clarify and communicate their policy positions on the use of social media, their support for training, and the ongoing technical support available to maintain and grow the potential uses for social media.

Suggestions for future research directions include:

- investigating the perceived differences in the impacts associated with the uptake of social media by different types of VET student (for example, by age, gender, type of qualification), by delivery mode (for example, traditional delivery versus online and distance learning), and by levels of teacher support (for example, levels of teacher guidance and input; see King 2016)

- exploring the possible differences in the impacts of social media, depending upon whether the driver for its use in VET training is primarily from the VET institution (for example, by setting up an institutional Facebook page for use by teachers and students), from the VET teacher, from students, or a mix of these drivers

- understanding better how a combination of multiple forms of social media being used in a qualification and the design of more blended curricula might have different types of impact as opposed to the impact from one form only

- examining how the attitudes of a wider range of VET teachers to social media may vary by age, gender, courses being delivered, teacher capability and levels of digital literacy

- reviewing the reliability of teacher opinions on social media and audit requirements through a study that also gains the views of audit and regulator experts.

The implications of such research for employers, training package developers and regulators need to be anticipated and considered; for example:

- Will it create barriers for employers or impact on their current positive view of social media?

- How will the inclusion of social media in VET courses be built into training packages in greater detail?

- What oversight should regulators have and what will their expectations be regarding evidence of quality?

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📎 Appendix A: interview questions

Interview questions for teachers

Q. Tell us what social media are being used in formal (classroom) and informal ways (outside of the classroom) by you in your VET training programs?

Q. Are you alone in using social media, or are others in the institution also using social media? If so, who are they and what forms of social media are they using for what training?

Q. What are the attitudes of:

1. Other teachers in your institution about the current and future use of social media?

2. Students about the current and future use of social media?

3. Their employers about the current and future use of social media?

Q. What are the benefits or affordances that you find in the use of social media generally around student learning and training?

Q. If we can now think more specifically, think about particular tools (Twitter, blogs, Facebook). What are the benefits from the use of particular forms of social media and student outcomes around learning?

Q. What are the negatives or disadvantages that you find in the use of social media generally around student learning?

Q. If we can now think more specifically, think about particular tools (Twitter, blogs, Facebook). What are the negatives or disadvantages about particular forms of social media and student outcomes around learning?

Q. Have you seen examples of students designing and introducing social media in training where a teacher had not set up its use? How has this happened and what were the outcomes around student learning, engagement, the teacher's response, etc.?

Q. What have been the challenges that you had to overcome to make a successful use of social media for VET training? Challenges to teachers, students and employers?

Q. Have you been able to link the use of social media to the learning and training in the workplace with their employers? Give examples.

Let us compare the outcomes around student outcomes being achieved through the use of social media compared to traditional forms of learning.

Q. Does the application of social media enhance student outcomes compared to more traditional forms of learning and training in VET? Let us examine some examples of why you think this?

Q. What softer or qualitative evidence (e.g. student, teacher and employer perceptions) can be provided as evidence of the gains from using social media?

Q. What harder or more quantitative evidence (e.g. records of student class attendance, completions, and attrition rates) can be provided as evidence of the gains from using social media?

Q. What are the data showing you on the impact on students (including evidence of engagement, completions, improved attendance, and reduced attrition)?

Let us explore what developments are occurring with assessment practices and audit to accommodate the growing use of social media.

Q. What assessment practices linked to the use of social media are providing evidence of competence?

Q. How is the assessment and the choice of social media designed to meet the standards of assessment?

Q. Are auditors and related bodies accepting this evidence gathered by social media? What social media (e.g. blogs) are auditors more likely to accept around evidence or does it not make any difference?

Conclusion

Q. What other questions did you expect me to ask but I did not?

Q. What other comments or advice would you like to add as I plan more interviews in your institution?

Interview questions for employers

Q. Tell us about you, your firm and your current or past students.

Q. Tell us what social media are being used:

1. in the classroom, and

2. in the workplace

3. in the VET training of your staff?

Q. What is your attitude about VET teachers using new technologies like social media to change how they train?

Q. What are the benefits to a VET student in the use of social media generally for their learning and training?

Q. What are the benefits to you as an employer of a VET student using social media generally for their learning and training?

Q. What are the negatives or disadvantages that could occur in the use of social media generally around student learning?

Q. Has social media been used to help learning and training in this workplace where you are the employer? Give examples.

Q. If social media is not being used, could it be used in your workplace, and what would need to happen for this to occur?

Let us compare the student outcomes being achieved through the use of social media with the outcomes from traditional forms of learning.

Q. Do you think that the use of social media might improve student outcomes compared to more traditional forms of learning and VET training? Let us examine some examples of why you think this.

Q. What softer evidence (e.g. student, teacher and employer perceptions) can you provide as evidence of the gains from using social media with your employees?

Q. What harder evidence (e.g. records of student class attendance, completion of a qualification, dropout rates) can you provide as evidence of the gains from using social media with your employees?

Let us explore what developments are occurring with assessment practices and audit to accommodate the growing use of social media.

Q. Students today are very skilled around new technologies. What forms of assessment do you think VET teachers need to use more often to take advantage of the skills of your young employees in using social media like Facebook, Twitter, blogs, etc.?

Conclusion

Q. What other questions did you expect me to ask but I did not?

📎 Appendix B: mini-cases of the use of new technologies in VET organisations

Case study 1

Holmesglen TAFE contains the Holmesglen Simulation Centre, which consists of specialist teaching spaces to replicate a range of health care environments, from home and allied health, to complex emergency, critical care, peri-operative and clinical ward contexts. It is used in a range of nursing, paramedical and medical education courses. In addition, there is the Simulated Tourism Centre at two campuses, where access to industry reservation systems allows tourism students to complete comprehensive flight and itinerary bookings in a live environment. These classrooms are adaptable to suit all aspects of course delivery for tourism and event management courses.

Case study 2

Swinburne University offers Swinburne Online, which uses a virtual classroom environment, where all learning material is developed and delivered online using technology such as live chat, webinars and interactive learning activities. E-learning advisors are contactable 24/7, textbooks are delivered as digital e-texts, and Swinburne CONNECT offers a custom social network. CONNECT enables students to post questions about their studies to other students and to create discussion groups. CONNECT also allows them to contact student liaison officers, to create interest groups, to chat socially, or to send private messages to other students directly and find students in their local area to take study groups offline.

Case study 3

TAFE Illawarra has restructured its Certificate IV in Building and Construction (previously a two-year course delivered face to face) to use a blended delivery model to increase student numbers and to improve completion rates. The course is delivered using Moodle and Adobe Connect, over one year, with students attending night classes during the week. They can choose to come to the campus or attend the classes via Adobe Connect. Delivered one subject at a time, the course has a clear structure and deadlines for assessment task submissions. Moodle resources include the recorded classes, learning videos created by the teachers and hosted on YouTube, self-marking practice and assessment quizzes, books and forums. Students create videos for some of their tasks, such as workplace inspections of a construction site. TAFE Illawarra reports that the results to date have been encouraging, with enrolments being 300% higher and assessment tasks being submitted on time by 80% of students. Also the quality of students' submitted work has improved.

Case study 4

Charles Sturt University has set up the u!magine Digital Learning Innovation Laboratory. It is a think-tank for educational innovation, promoting online learning and a laboratory experimentation. One u!magine project is the 'Riverina Shore' simulation, which allows the exploration of the potential for interaction between clients, students, practitioners, and academics in healthcare activities. Another project is Work Place Learning Assessment in

the Mobile Age, which promotes the greater use of personal mobile technologies and site-available technologies for assessing and moderating student learning.

Case study 5

North Coast Institute of TAFE has redesigned its digital media course using a flexible gamification design concept called 'The Velvet Throne'. It allows for various delivery levels and team-based approaches from teachers involved in the delivery. The flexible gamification design integrates a range of technology including Google Apps (GAFE), Moodle LMS, Online Portfolios and Badges. It incorporates low-tech and high-tech solutions for data collection and sharing of content. This approach also promotes peer support, collaboration, self-paced learning and the creation of learning communities. The institute reports that the average completion rates for Australian VET (TAFE) courses is 32%, and even lower at 7–12% in smaller towns. Completion rates are up to 63% following this project, while it is reported that the gamification project has created more autonomous and resilient learners.

Case study 6

Challenger Institute of Technology's Fremantle campus uses maritime simulators in teaching the skills needed to navigate vessels through challenging waters. The simulators provide marine operations and engineering students with access to extensive training in routine navigation, cargo handling and engine operations. They are used primarily for the training of personnel servicing the maritime and offshore oil and gas industries. The simulators are used for a range of courses, from commercial fishing and marine tourism, to marine operations and engineering, including a certificate II through to the advanced diploma level.

Case study 7

Australia's oil and gas industry, specifically the LNG industry, is growing rapidly throughout Australia. In Perth, Challenger Institute of Technology has developed technology to allow workers in remote locations in the oil and gas industry to have external access to its process plant at the Australian Centre for Energy and Process Training. The target learner groups undertake process plant qualifications at certificate II level and above. This competency training for remote workers is estimated to save employers and employees both time and money, cutting down by about half the amount of time spent at the institute's training facility.

Case study 8

TAFE SA has partnered with the technology company ETRAIN Interactive to deliver 3D training simulations in the traditional trade areas. The partnership has resulted in pilot training modules in the areas of construction, carpentry, plumbing and minerals drilling, with recent extensions to nursing. The gaming-like simulations suit the visual learning styles of students who struggle with more formal book learning. Students build skills through repetition and can work through modules multiple times to improve their assessment.

Appendix C: interview locations

Site 1 – Federation Training

Federation Training (in Victoria) has over 85 years experience in training and education, and promotes the use of flexible training solutions across its 10 campuses. Its primary objective is to improve the opportunities and outcomes for VET students across Gippsland and South Eastern Victoria. Federation Training delivers training in business, health, community service, forestry, maritime, conservation, land management and traditional trades. Federation Training offers a variety of courses, from pre-apprenticeships, apprenticeships and traineeships, to certificates, diplomas and advanced diplomas with flexible pathway options to diploma and bachelor degree qualifications. The organisation draws on its strong links with business and industry experts, especially in the Gippsland region to design its course offerings.

Site 2 – TAFE NSW's Open Training and Education Network

TAFE NSW's Open Training and Education Network (OTEN) is the largest non-classroom-based education provider in Australia, with over 100 000 enrolments in approximately 250 courses. OTEN offers a wide range of nationally recognised VET qualifications, which are highly valued by industry, while its world-class distance education services support social inclusion, participation and productivity. The flexible nature of its course delivery includes access by students to web conferencing, including interactive whiteboard, text chat, audio, video, polling, application sharing, web browsing, file sharing and presentation tools. Web conferencing software allows group meetings, virtual classes, recording of classes or meetings, guest lecturers, online assessment and online conferences. Other resources include blogs, wikis, and videos that include viewing information through sites such as YouTube, TeacherTube and the use of audio and podcast files shared via services such as iTunes or hosted on a website.

Site 3 – TAFE Queensland

TAFE Queensland is the largest provider of further education and training in Queensland. The TAFE Queensland network is made up of six regions, delivering training from Thursday Island to the Gold Coast, from Bundaberg to Roma and across the south-east corner. Interviews with TAFE Queensland were with teachers and students from their Brisbane, SkillsTech and Caboolture locations. Brisbane has over 40 000 local and international students on its campus locations. TAFE Queensland SkillsTech is Queensland's leading specialist provider of trade and technical training. It delivers training across approximately 170 trade and technical qualifications and has expertise in pre-apprenticeships, apprenticeships, traineeships, short courses and advanced post-trade studies. It trains more than 20 000 students annually.