**Beyond the Horizon: Learning arising from the use of Twitter by schools in New Zealand**

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**Abstract**

Identifying learning to arise from use of the Twitter platform, this paper provides detail relating to an examination of the use of that platform by 1000 schools located in New Zealand. Physically located almost 12,000 miles from the researcher's United Kingdom work base, the examination serves to both emphasise the contribution which social media makes to the removal of geographical boundaries and to highlight the associated risks and impact arising.

Two points of learning are outlined; that relating to the generation and maintenance of the school's e-profile and the impact of that institution having a Twitter use strategy. Specifically, the study identifies that despite there being many schools based in New Zealand which have engaged with the Twitter platform, that platform has not been the subject of consistent focus and schools are at risk of a negative online profile being generated. Numerous factors are seen to have influenced the presence of a Twitter platform use strategy and significant amongst these is enforced engagement as a consequence of the efforts the Twitter community has chosen to make with regard to school Twitter platform-related inaction. An overarching factor is the acknowledgement that perceptions of appropriate use and behaviour are heavily influenced by what is deemed acceptable in contemporary operational practice and, with that judgement being time specific, an ongoing challenge is presented which can prove to be a distraction from other elements of the school leadership and management role.

**Introduction**

The use of social media, internet applications which 'allow the creation and exchange of user generated content' (Kaplan and Haenlein, 2010), has become commonplace. This use has resulted in an increasing pool of the population being constantly connected (Stevenson and Peck, 2011; Evans, 2014). Twitter is one example of a social media platform. Launched in 2006, by 2012 it had become the 9th most visited website in the world (Wilkinson and Thelwall, 2012), on its 7th birthday was reported to be hosting 400 million tweets per day (Tsukayama, 2013) and in 2014 was cited to have 15 million users (Power, 2014).

The pace at which different sectors have availed themselves of the advantages of the Twitter platform has varied. The approach taken is generally regarded to be linked to sector attitudes, expectations of the role being undertaken and personal preferences. This is as reflective of the schools sector as any other.

Fairly recent education-related literature (e.g. Manchir, 2012; Stuchbery, 2013) has identified use of Twitter within the classroom to be innovative. Beyond the classroom the platform is gaining a reputation for having a significant practical impact. It is seen, for example, as having the potential to respond to a CPD need (Lu, 2011; Foote, 2014). Here the platform provides an opportunity to culture both the learning environment and a personal learning network, of this being supported by the impact of a levelling effect, and of postings being underpinned by subject matter passion (Beadle, 2014). In part this is the consequence of the platform having the potential, whether users consciously recognise this or not, to bridge the gap between the professional role and other aspects of the Tweeter's daily life (Messner, 2009; Lowe and Laffey, 2011; Alfonzo, 2014). This bridging effect can also be seen in the connection which the Twitter platform facilitates between the postings made by the account holding school and those who choose to engage with the material tweeted, termed 'followers'. No longer is the influence of school communications geographically bounded.

This paper identifies learning arising from an examination of the use of Twitter platform by 1000 randomly selected schools located in New Zealand. These schools are physically located almost 12,000 miles from the researcher's United Kingdom work base, serving to emphasise the removal of the geographical boundary and that, as Fang et al (2014, p.802) highlight, the 'audience participating in online interactions is not defined by the physical setting in which the conversation originates'.

**Theoretical underpinning**

The theoretical context of this paper is considered under three headings: the online profile and the determination of authenticity; the impact of the blurring of professional and private lives; and the influence of the technological pace of change.

*Online profile and the determination of authenticity*

In recent years significant attention has been paid to the creation of the online profile. There are many sources which outline how to create a profile which creates a positive professional image (e.g. Devlin, 2009; Peregrin, 2012). Contributing to that profile are numerous elements, with the use of pictures a factor which has received popular attention (Kapidzic and Martins, 2015). A focus on self-presentation, in the context of this paper how the school portrays itself, is not a new concept (Cress et al, 2014). The intention is that that self-presentation will 'please the audience' (Baumeister, 1982), in that the audience will like what they see and wish to align themselves with that source. In the context of the Twitter platform, this is likely to result in the audience becoming a 'follower' of the postings made.

Contributing to the cultured perception is the ability to generate an image that supports the onlooker to bridge the gap between the online and physical life. This is potentially a less demanding task where a link has already been established in physical life as seen, for example, between schools and the parents of attending students. Nevertheless the bridging task, which includes an assessment of authenticity, requires co-presence, psychological involvement and behavioural engagement. Despite positive intentions, a compromising of the online image either as a result of ill thought through actions, or for malicious means, can occur (Brandt, 2004). The result is that more than half of social network users engage with mechanisms to conceal their profile attributes from other users of those networks (Chen et al, 2014).

*Blurring of professional and private lives*

Social media is acknowledged play a key role in blurring the distinction between the professional and the private life and, over a number of disciplines, there is a wealth of commentary which questions the desirability of this effect (e.g. Scott, 2013; Fang et al, 2014; Rogstad, 2014). Abril et al (2012, p.64) explain professionalism to be the 'language of the workplace', a language which embraces conduct, appropriate judgement, stature and competency. The emphasis on the creation of a positive impression is clear. Challenge arises from a shortfall in understanding how social media has the potential to contribute to the creation of an impression. This is, in part, the result of social media having the capacity to facilitate lives to become 'simultaneously embodied and informational' (Goodings and Tucker, 2014, p.38).

Also noted is the significance of duration. Whilst action, professional or otherwise, might historically have been perceived against the backdrop of previous activities, use of social media is not dependent upon that backdrop being established. It is possible, for example, to read a Tweet without knowing anything about the author or authoring body and, in scenarios such as this, the reader risks being drawn into filling any gap in understanding. A lack of clarity has led to social media being both insufficiently exploited (Power, 2014) and the site of a considered performance (Mazali, 2011). Whilst veering away from active engagement with an inadequately understood tool might generally be regarded to be an appropriately cautious action, in the domain of social media use, the presence of this gap in activity can be misinterpreted. Mazali (2011, p.290) highlights that 'people [are] made aware through and by the technologies they use'. Non-use and partial use of social media, for example, both contribute to the impression which is generated.

*The technological pace of change*

The difficulties associated with keeping pace with the potential of technology and the rate at which that technology changes is regularly noted within the literature (Whalen, 2012; Niederhauser and Wessling, 2011; Baker, 2012). At worst the effect is acknowledged as having the potential to have a paralysing effect (Fry and Rigler, 2014), what Sutton and Desantis (2016) discuss using the 'change blindness' terminology. Argument is presented that it is the first steps to adopting technology which present the greatest difficulties, with subsequent use tending to be the consequence of a 'technological one-way route' (Beadle, 2015c). At the least, emerging technologies serve to provide a distraction. Some reluctance to engage with technologies is the consequence of change fatigue; a factor reasoned to be as apparent within the education sector as elsewhere (Sutton and Desantis, 2016).

Perceptions of appropriate use and behaviour are determined by what has been deemed acceptable in operational practice, the effect of a popularist approach and an inevitable merger of perspectives. As Baker (2012, p.267) acknowledges, 'both determinism and utopianism are commonly found in technology writing'. Furthermore the effect, as Kennedy (2012) notes, echoing a sentiment expressed by Pirie (2012) at a similar time of writing, is that the unrelenting advancement of technology in the education sector has put the 'power in the hands of individuals'. This focus on a contained determination of what is deemed acceptable is also considered in relation to legislation where Drechsler and Kostakis (2014, p.128) note, for instance, that even the 'law measures technology against what is desirable now'.

One influence on the popularist technological approach is the presence of supportive resources (Niederhauser and Wessling, 2011; Sutton and Desantis, 2016); if the educational institution lacks interest or expertise in the use, for example, of social media platforms, then it is inevitable that this will become apparent. A perceived return on the investment, that investment in the case of social media often amounting to time, is argued to be a necessary prerequisite for action to be taken (Sutton and Desantis, 2016).

**Method**

Using a random number generator, 1000 schools were selected from a list of schools provided on the New Zealand government website. 305 of the schools were identified to have a Twitter account, with 1 in 10 of those schools having more than one account. All of the identified accounts associated with each of the randomly selected schools were included in the study.

The school names were replaced by numbers in order to protect their anonymity. They were also given the precursor NZ and, where there were multiple accounts for a single school, the first account was assigned the differentiator 'a' at the end, the second 'b' etc, e.g. NZ10a.

The data gathered was included on an Excel spreadsheet which included the sample number, Twitter handle, date the account was created and, as at the date on which the detail was gathered, the number of accounts being followed, following, and the number of Tweets posted. Additionally, qualitative notes were assembled about the nature and composition of the postings made. Accounts were deemed to be active if there had been one or more postings made from that account within the 12 months preceding the date of examination, with all accounts being examined over an eight month period ending September 2015. The analysis benefited from the use of a mixed methods approach.

**Findings and analysis**

***Engagement with the Twitter platform***

Engagement with the Twitter platform by schools in New Zealand is erratic. There are many schools which do not appear to have a Twitter account, although few of those institutions (less than 0.01% of the sample) were identified to have entirely avoided being mentioned on the Twitter platform. A large proportion of the accessed Twitter accounts were created and first used over the 5 year period commencing 2009. However some schools were not identified to have ever used the platform and others were identified to have commenced using the platform and then to have discontinued their use; some on more than one occasion.

The least number of messages posted from an account regarded as being disused (on the basis of no postings having been made for the 12 month period commencing the date of examination) was one. Here NZ2 made a single posting announcing that they 'were now online'. Similarly NZ67, in a Twitter life that lasted 2 days, posted two tweets. The first announced that they were now 'in the twittersphere', and the second, posted the next day, announced that 'the twittersphere is rather quiet'. What they had expected to occur over that short time period was not made clear although the absence of further postings suggests that they had been deterred from further engagement.

The making of a limited number of postings does not mean that the accounts were not engaged with. Several schools were identified to have established Twitter accounts and then used them largely for the purpose of following the postings made by others. Here they were identified to be gaining access to those postings through a single location, for example for the purpose of professional updating. The 33 accounts followed by NZ39 and the 19 accounts followed by NZ163 included, for example, a significant number of school principals and educators, academics and politicians.

Amongst the grouping of schools which were identified to have discontinued their use, there is some evidence of an effort to re-establish a Twitter presence. Furthermore, some schools were identified to have both created, commenced using and terminated engagement with the Twitter platform on more than two occasions, with all of these accounts remaining visible. In other instances this re-engagement occurred with a single account. Instances of where the phraseology used might indicate a previous account existed, such as NZ89's use of 'Just set up our brand new Twitter account', were not always seen to result in the identification of any previous account. Instead, there was indication that the phraseology used in Twitter postings may have colloquial undertones.

A significant volume of the accounts examined exhibited intermittent use. NZ1, for example, posted on average once per month when considered over the 12 month period preceding the date of examination. This can be compared to NZ29 which, during term time, made postings several times each day. That running a twitter account requires stamina was identified, although this need did not consistently explain accounts demonstrating intermittent engagement. Intermittent use was identified to often serve as a precursor for use of the platform being terminated, particularly where the frequency of postings was also identified to have decreased.

Where a current Twitter presence was identified, the accounts were seen to have a tendency to incorporate the school name into the Twitter handle; usually in the format main name followed by, for example, 'high', 'college' or 'girls'. However there were instances (e.g. NZ43, NZ85 and NZ153) where the name comprised the school initials, what appeared to be a 'nickname' for the school title, and on occasion the school names reversed. In the latter instance this would appear to have been the result of there being other schools with the same name using the Twitter platform. Including the initials 'NZ' at the end of the Twitter handle was not unusual, particularly amongst accounts where the school name was also abbreviated to initials (e.g. NZ73 and NZ80).

Where schools have actively engaged with the Twitter platform they were often seen to have more than one account. NZ57 was seen, for example, to have established three twitter accounts over a period of 5 years and, based on postings which were made within the 12 months preceding the date of examination, each account remained active. Here use of multiple accounts provided a filtering mechanism with one account used for school to staff communication, the second account providing urgent messages to parents (such as those regarding weather based school closures) and the third containing generic publicity detail. Generally subsidiary accounts focused on short term events such as school residential trips, or emanated from individual departments of the school. Indeed, where multiple accounts were present, there were some examples of a hierarchical framework being present in which there was a central account which made reference to subsidiary accounts both in the postings made and Twitter handles adopted. The subsidiary account for NZ25b, for example, simply had the word 'technology' appended to the end of the main account (i.e. NZ25a) name.

A significant number of teaching staff, including those working at schools which were not seen to have used the Twitter platform, or which had terminated their use of that platform, were identified to have purposefully established a Twitter presence. Indeed, it was these individuals who were, in part, responsible for very few of the 1000 schools having entirely avoided being mentioned on the Twitter platform. It was not unusual to see teachers introducing themselves as being a 'Teacher of [X] at School [Y]'. Indeed, the majority of the teaching staff profiles accessed included specific mention of their school being based in New Zealand e.g. "I am an English teacher at [X], NZ', ‘Deputy Principal at [X], NZ’ and ' teacher and first XI coach at [X], NZ...'.

These personal accounts were not a subject of the examination beyond the role which they played in providing a presence on the Twitter platform for the respective schools. However it was noted that in some instances the postings made from those accounts could be perceived as failing to positively contribute towards a positive professional image. This is not specific to teachers in the New Zealand context, having been identified by the researcher in other studies (e.g. Beadle, 2015a, 2015b), but where specific links to those accounts were made from school based Twitter accounts, there was a risk of negativity being attributed to the school.

Not all the accounts which were seen to have initially been created and maintained by an individual educator contained questionable content. Indeed, there were four accounts, each at first sight appearing to be attributed to one individual, and which fulfilled for the purpose of this research the criteria deemed reflective of a school account. In each instance the account holder was the principal of the school and no other school Twitter account was in operation. Furthermore, in each instance those accounts provided in their Twitter profile the school name, location and details of the school website. In addition, in each instance the school name formed at least part of the Twitter handle.

***Creating an impression***

Some school accounts specifically set out how they intended to use the capabilities of the Twitter platform. For example NZ88 identified their intention to provide 'updates and announcements' and NZ266 highlighted that their postings were a repository of messages posted on large screens around the school. In each instance these details were presented within the account header. Also seen were examples of the school's intended approach being communicated as their first posting. NZ189, for example, highlighted they intended to post 'news of events at school, parenting tips, educational websites'.

Less frequently identified was a desire to attract 'followers'; other users of the Twitter platform. This is a focus which is often identified in use made by commercial organisations and celebrities. Two examples of this approach were identified, for example NZ241's "Please follow us and we will do the same to you". Not surprisingly, compared to accounts held by commercial organisations and celebrities, the number of Tweet followers which were attracted by the New Zealand schools was limited. The average number of followers per account was 48, however there was significant variation. Those accounts which tweeted more frequently tended to have more followers and those schools with more than one account tended not to have an equal number of followers across all their accounts. This latter point suggests that the school's followers were either selective in their approach or were unaware of the presence of additional accounts. There would, for example, be little reason to follow a subsidiary account established for a school residential trip if there was no connection to that activity.

Pseudo accounts were identified. Some of the example accounts highlighted were identified to be hosting questionable postings, for example relating to the competence of named members of the school teaching staff. Generally it was the nature of the postings made and the detail arising from the profiles of the accounts which were followed or were following that account which permitted a judgement to be made about the account's authenticity. Appearing to demonstrate an awareness of there being a risk of a digital presence being assumed, a small number of schools were identified to have created accounts but failed to use them. In a number of these examples the respective account simply reveals a platform notification that '[X] hasn't tweeted yet'. Furthermore, there were two examples (NZ91a-b and NZ263a-b) where the schools were identified to have taken a particularly robust approach in using more than one derivative of their school name.

Contributing to the appearance of legitimacy was the use of pictorial images. Specifically, inclusion of the school crest was identified to be a popular feature contributing to the creation of an impression that account postings emanated from that school. The risk of this assumed approach appeared to explain why some schools chose to identify that they were, as exampled by the header provided by NZ152, "The official Twitter account for ..." The contribution by a legitimate school account of a poor pictorial image, was also seen to result in a negative effect. NZ84 and NZ116, for example, were deemed to be legitimate accounts based on having provided links to material on the school website and inclusion of material publicising school events. However those accounts included exceptionally poor quality profile pictures suggesting that little thought had been given to the contribution that that image makes to the impression being cultured. This identified that pictorial representation, similarly to the words posted, is worthy of attention. Whether it is this risk which accounts for some of the studied schools having chosen not to personalise their Twitter home page, simply using the Twitter-provided 'logo', can be questioned.

Offering a similar capability to other social media platforms, Twitter permits account holders to prevent unauthorised readers from accessing their postings. This was a capability used by a little over 0.01% of the sample group. In each instance, and as part of the research exercise, the researcher made a request for access. Although in each instance that request was made from the researcher's Twitter account, an account which highlights in the profile detail that she is a researcher into e-technologies, none of her requests were granted. It was not possible to identify whether the requests were ignored or refused, since no contact was received from any of these schools.

Language used in Tweets was generally cautious, and in some cases repetitive. Whether this was the result of a lack of capability or understanding could not be determined. In some cases the caution identified resulted in compromises being made. NZ34, for example, provided regular encouragement to their followers using the word 'please', even though this meant compromising other phraseology. Twitter postings are limited to 140 characters. That limitation was also reflected in some use of 'text speak' within postings. NZ112, for example, regularly substituted '2mrw' for the word tomorrow, 'u' for you and 'b' for be, even when there was capacity amongst the 140 character limitation for each word to be spelled out in full. Some tweets were seen to alternate between being posted in the first person and taking a more corporate stance. Accounts written entirely in the first person, and particularly those using informal phraseology such as NZ50’s tendency towards starting each tweet with the words ‘hey guys’, suggest the school accounts had the potential to be regarded to be little more than an extension of a personal account.

A tendency to use repetitive phraseology, such as NZ14's use of the 'I posted a new photo to...' at the start of each of 30 consecutive postings was noted. Likewise, repeated use of hyperlinks was not unusual. NZ13 hyperlinked every tweet and was clearly attempting to entice engagement with those resources by avoiding providing full detail within the remainder of the tweet, for example "Year 8 & 9 option choices for 2016: Current Year 8 and 9 students have been given thei ...read more at [hyperlink]" (sic). NZ86 was seen, over the three month period preceding the date of examination, to have changed from attaching web links to text, to posting web links without any accompanying explanation. Some accounts merged these two approaches. For example NZ62, with the exception of their first tweet announcing their arrival on Twitter, posted the same tweet on 43 occasions - '[X] News & Events Update' - followed by a hyperlink to a web page. Here Twitter was seen to be little more than a means of notifying an update to a web page, despite that web page already offering its own 'subscription' facility.

Whilst the language used was generally cautious, humour was not entirely excluded. NZ145 started several postings with a humorous 'note to self' reminder whilst another of their postings raised the question 'Who needs a crystal ball when...?'. Likewise, NZ77 followed up their 'First tweet' posting with another which simply read 'Second tweet'. However, more significant exceptions to the general perspective of caution (potentially reflecting a point of crisis in the employment relationship for the individual making the posting) were identified. Two accounts posted expletives in relation to their frustrations with the teaching role. In both instances use of those accounts was identified to immediately terminate, suggesting that the individuals making the postings had sole responsibility for the accounts and thus that the schools were either ignorant of, or were unable to subsequently delete or refine, the nature of the posting made.

**Discussion**

This discussion is organised under two headings, reflective of this paper's learning focus. Generation and maintenance of the education institution's online profile is followed by consideration of the impact of the education institution having a Twitter use strategy.

***The generation and maintenance of the education institution's online profile***

Twitter is a free-to-access platform and this, together with user-friendly nature of the software, appears to support engagement. The exponential growth of the platform (Wilkinson and Thelwall, 2012) provides testament that the approach provided has generally been perceived to be attractive. However, there are also indications that the ramifications of establishing accounts and making postings, and in particular how use of the Twitter platform creates an impression, the online profile, has not always been the subject of consistent focus by the studied schools.

Social media is identified from the literature as providing a forum for performance (Mazali, 2011). Absence of participation does not exempt a school from that performance but, as identified from the study, results in shortfalls being filled and online personas being assumed. Each school's social media profile was identified to be influenced by numerous factors, and that this included pictures/illustrations, as well as words. The literature highlighted that self-presentation is not a new concept (Cress et al, 2014). The intention is that that self-presentation will 'please the audience' (Baumeister, 1982), in that the audience will like what they see and wish to align themselves with that source. But what if they do not like what they see? The effort which the typical reader will engage in the task of determining the authenticity of the account, particularly when factors are deployed to give the appearance of legitimacy, can be questioned. As a result of the number of individuals with which a school is broadly associated, the potential ramifications of those relationships, and the willingness of staff members to associate themselves (and the material they post) with the school, the likelihood of the school being on the receiving end of malicious intent or the prankster's focus appears to be significant. Any failure to recognise and respond to this risk is, therefore, of significant concern. Furthermore, any failure to respond to the wealth of advice which is identified to be available with regard to the use of social media platforms appears to indicate a lack of awareness surrounding the online profile broadly.

Some schools demonstrate caution in their postings by 'protecting' their Tweets. However, the extent to which those schools are aware of the limitations of their approach remains unknown and is certainly questioned in the light of the identified shortfalls in the understanding of platform capabilities. What is established is that there are some unrealistic expectations associated with Twitter use, as exampled by the desire to rapidly establish a Twitter following and illustrated by the disappointment expressed when this does not occur as rapidly as anticipated. Furthermore, that schools cannot expect others to perceive them to be distanced from the accounts with which they are connected. Despite the perceptions surrounding the growth in use of the Twitter platform, maintenance of a Twitter presence requires sustained effort and turnover of staff will inevitably have an impact.

***The impact of the education institution having a Twitter use strategy***

Where Twitter platform use was focused, this indicated the presence of a strategy. Indeed that focus was identified to influence practice both within and outside the school. In some instances the identified strategy appeared to be a simple desire to extract value from the platform, without any effort being made to offer significant contribution. This was seen, for example, where school accounts largely used the 'follow' facility. However, with regard to the more significant body of schools identified to make two-way use of the Twitter platform, the termination of accounts such as those associated with a school residential once that activity was completed, also serves to emphasise a purposeful, and potentially strategic, focus. A third factor contributing to identification of the presence of a strategic approach is the hierarchical organisation of accounts, albeit that that approach might have been established simply as a consequence of the success of using a single account.

A significant body of school accounts were established within eight years of the Twitter platform being created. For accounts established in the earliest years, the influence of novelty cannot be discounted. As was identified from the literature, perceptions of appropriate use and behaviour are heavily influenced by what is deemed acceptable in operational practice and it is inevitable that such a judgement is time specific. When Twitter was first established it is unlikely that schools, or indeed many of Twitter's current users, would have been able to determine how significant use of the platform would become. This is, in part, the consequence of the developmental nature of technology.

The lack of direction exhibited by some accounts, including accounts which at the point of examination had been established for some years, was evident within the study. The ability to adjust the strategic approach, indeed to adopt a strategy when previously there had been a lack of purposeful direction, was indicated to be problematic. Here the influence of account 'followers' was apparent. Even when use of the platform appeared to have been terminated, many of the accounts retained at least some of their following. This ready audience might well explain why some schools chose to reignite their use of those accounts as opposed to establishing a new one. The literature (e.g. Kennedy, 2012; Pirie, 2012) identifies technology as having put power into the hands of individuals, and this study provides clear indication that those individuals include account followers. What appears to be a simple process, the reigniting of an account, was identified to make it difficult to establish a Twitter use strategy, especially where such a strategy has not been previously used.

**Conclusion**

This study has identified that there are many schools based in New Zealand which have engaged with the Twitter platform. However, like other technological tools, competence in use varies and some engagement appears to be little more than the consequence of efforts to emulate practice identified elsewhere. As the period of time during which the Twitter platform has been used increases, a legacy of use and, in particular, the fall out of ill thought through approaches, appear to be becoming an additional feature of school management. Efforts made to engage with the platform are not always effectively embedded into school operating processes; as might be exampled through the presence of an institutional strategy for Twitter use. Whilst this absence of focus might well be for commendable reasons, such as a desire to focus resources on other elements of the school's life, the examined schools were being seen as being forced into engagement with the Twitter platform. This occurred both through action, and through the efforts the Twitter community has chosen to make with regard to school Twitter platform-related inaction.

Whilst the Twitter platform offers a number of advantages, the presence of the platform and the way it is engaged with, presents a significant risk. Generally the negative effect is revealed through a compromised online school profile. As an intangible factor, and in the presence of the competing demands with which a school is faced, there is a danger that the need to manage this online profile can be overlooked. Certainly management of the Twitter profile can detract attention from other elements of school life, with the platform serving as a potential outlet for arising frustrations. The effect is that the Twitter platform can be berated for providing an unwelcomed distraction. Some of the identified risks emanate from outside the school establishment, but there is much that arises from the actions of those with employment-related links to the organisation. This employment-related link adds an additional level of complexity and is flagged up as offering further research potential.

**References**

Abril, P., Levin, A. and Del Riego, A. (2012). Blurred boundaries: Social media privacy and the twenty first century employee. *American Business Law Journal,* 49(1), 63-124.

Alfonzo, P. (2014). Using Twitter hashtags for information literacy instruction. *Computers in Libraries,* 34(7), 19-22.

Baker, M. (2012). Technology criticism for technophiles. *Public Services Quarterly,* 8(3), 264-270.

Baumeister, R. (1982). A self presentational view of social phenomena. *Psychological Bulletin,* 91(1), 3-26.

Beadle, H. (2014). The Tweet smell of success: perceptions of Twitter as a CPD tool. In International Professional Development Association 2014 International Conference - Rethinking Models of Professional Learning, 28th to 29th November 2014, Aston University Conference Centre, Birmingham.

Beadle, H. (2015a). Who watches the Twitterers?  Self-regulation in the use of social media. In the  *ESRC Seminar Regulation and the Individual Experience of Work Conference*, 12th to 13th February 2015, University of Newcastle, Newcastle.

Beadle, H. (2015b). Teach, Tweet, Repeat: A comparison of Education professionals' perceptions of Twitter. In the *6th Teacher Education Advancement Network (TEAN) Annual Conference*, 13th to 14th May 2015, Aston University Conference Centre, Birmingham.

Beadle, H. (2015c). No *e-*asy solution: E-working change. A case study exploring the increasing use of e-working in a local authority. Unpublished PhD thesis, University of Portsmouth.

Brandt, A. (2004). Does your online profile say something you wouldn't? *PC World,* 22(8), 50.

Burgess, J. and Bruns, A. (2012). Twitter archives and the challenges of ‘Big Social Data’ for media and communication research. *M/C Journal,* 15(5), 8.

Chen, J., Kiremire, A., Brust, M. and Phoha, V. (2014). Modeling online social network users' profile attribute disclosure behaviour from a game theoretic perspective. *Computer Communications*, 49, 18-32.

Cress, U., Schwämmlein, E., Wodzicki, K. and Kimmerle, J. (2014). Searching for the perfect fit: The interaction of community type and profile design in online communities. *Computers in Human Behaviour,* 38, 313-321.

Devlin, D. (2009). How to look your best online. *Real Simple,* 10(9), 145.

Drechsler, W. and Kostakis, V. (2014). Should law keep pace with technology? Law as Katechon. *Bulletin of Science, Technology and Society,* 34(5-6), 128-132.

Evans, C. (2014). Twitter for teaching: Can social media be used to enhance the process of learning? *British Journal of Educational Technology,* 45(5), 902-915.

Fang, L., Mishna, F., Zhang, V., Van Wert, M. and Bogo, M. (2014). Social media and social work education: Understanding and dealing with the new digital world. Social Work in Heath Care, 53(9), 800-814.

Foote, C. (2014). A Twitter EdChat: a global tool, a local focus. *Internet@Schools,* 21(4), 12-13.

Fry, B. and Rigler, D. (2014). Embracing the pace of IT change. *Software World,* 45(4), 11-12.

Goodings, L. and Tucker, I. (2014). Social media and the co-production of bodies online: Bergson, Serres and Facebook's timeline. *Media, Culture and Society,* 36(1), 37-51.

Kapidzic, S. and Martins, N. (2015). Mirroring the media: The relationship between media consumption, media internalization, and profile picture characteristics on Facebook*. Journal of Broadcasting and Electronic Media*, 59(2), 278-297

Kaplan, A. and Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59–68.

Kennedy, M. (2012). Education technology transformation. *American School & University,* 84(7), 17-19.

### Lowe, B. and Laffey, D. (2011). Is Twitter for birds?: Using Twitter to enhance student learning in a marketing course. *Journal of Marketing Education,* 33(2), 183-192.

### Lu, A. (2011). Twitter seen evolving into professional-development tool. *Education Week,* 20(36), 20.

### Manchir, M. (2012). Twitter evolves as a tool for little ones to tweet about school activities. *Education Week,*  31(24), 9.

Mazali, T. (2011). Social media as a new public sphere. *Leonardo,* 44(3), 290-291.

### Messner, K. (2009). Pleased to tweet you: making a case for Twitter in the classroom. *School Library Journal,* 55(12), 44-47.

Niederhauser, D. and Wessling, S. (2011). Professional development: Catalyst for Change? *Learning and Leading with Technology,* 38(8), 38-39.

Peregrin, T. (2012). LinkedIn Profile Makeover: Optimising your professional online profile. *Journal of the Academy of Nutrition and Dietetics,* 112(1), 23-25.

Pirie, C. (2012). Technology + Learning = Inspiration. *T&D,* 66(12), 38-41.

Power, A. (2014). What is social media? *British Journal of Midwifery,* 22(12), 896-897.

Rogstad, I. (2014). Political news journalists in social media: Transforming political reporters into political pundits? *Journalism Practice,* 8(6), 688-703.

Scott, G. (2013). Social media is blurring professional boundaries. *Nursing Standard,* 27(52), 1.

Stevenson, S. and Peck, L. (2011). 'I am eating a sandwich now': Intent and foresight in the Twitter age. *Journal of Mass Media Ethics,* 26(1), 56-65.

Stuchbery, M. (2013). Using Twitter to teach civics and citizenship in a year 8 classroom. *Ethos,* 21(1), 23-24.

Sutton, K. and Desantis, J. (15 April, 2016). Beyond change blindness: Embracing the technology revolution in higher education. *Innovations in Education and Teaching International,* 1-6.

Tsukayama, H. (2013). Twitter turns 7: Users send over 400 million tweets per day. *The Washington Post.* Retrieved June 14, 2016, from <http://www.washingtonpost.com/business/technology/twitter-turns-7-users-send-over-400-million-tweets-per-day/2013/03/21/2925ef60-9222-11e2-bdea-e32ad90da239_story.html>

Whalen, D. (2012). Is governance keeping pace with technology, business change? *Directorship,* March/April, 77.

Wilkinson, D. and Thelwall, M. (2012). Trending Twitter topics in English: An international comparison*. Journal of the American Society for Information Science and Technology*, 63(8), 1631-1646.