Blogging and Tweeting in the Classroom: exploring how effective use of new media can help teaching and learning in Primary Schools.

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Abstract

There is a growing body of evidence that the educational use of social media has the potential to enhance a number of aspects of teaching and learning but there is a limited range of research on how Twitter can be integrated into classroom practice and school-life in primary schools. This paper adds to the emerging evidence of how social media such as Twitter has made valuable contributions to professional practice in three primary schools in the north-west of England. The study reveals how social media can be used as a learning tool for pupils and teachers: as a way of facilitating communication within and beyond the classroom; and as a tool for professional development. The study reveals evidence of good practice and offers suggestions for further development of social media within primary school practice.

Key words

Social media; Twitter; primary schools; classroom practice; learning tool.

Introduction

A recent tweet from a school's Year 3 Twitter account reads: "@_jkrowling The wand chooses the wizard!!" Various snapshots of children reading letters and playing with Harry Potter-esque wands are attached. An hour later, JK Rowling tweeted back at the class, and shared the images with her 6.3 million 'followers', saying "@year3 That looks like a fun lesson!" A few hours after Rowling had sent this tweet, the images shared by the class had been 'retweeted' and viewed thousands of times by Rowling's international audience.

Until relatively recently schools were limited in the ways they could share lesson activity like this with audiences outside the school gates. Such audiences were typically local (primarily parents), and interactions occurred on a relatively infrequent basis and reported retrospectively on activities. However, the adoption of social networking sites (such as Twitter and Facebook) has the potential to transform the ways that teachers and pupils communicate beyond the classroom. Now, using social media, teachers and pupils have the capability to instantly and publicly share their work with wider audiences. This 'audience' could include world-renowned authors, sports people and politicians (as well as parents and carers), and children are able to receive feedback from this audience in real-time (Waller 2010; Williams 2008). The extension of the potential audience and rapid changes in the form and timing of sharing work are just two of the significant shifts in classroom practice arising from the integration of blogs and microblogging technologies (Davies and Merchant, 2009; Waller, 2011; McWilliams et al., 2013). It is clear that digital texts, such as blogs, or the tweet from @jk_rowling above, account for a growing and more significant proportion of children's social and educational environments, including their reading and writing habits (Levy 2009; Carpenter and Krutka, 2014). As a result, some teachers have started to adopt social media as communication and teaching tools in the schools (Barber and Cooper, 2012) and educators, therefore, should consider the impact that the integration of these 'new' technologies is having on the learning of children.

There is an emerging body of literature to draw upon to demonstrate the potential for social media to be used to support teaching and learning (for example, Carpenter and Krutka, 2014). Much of this

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research has explored using blogs and Twitter as sources of information and as communication tools in Secondary and Tertiary settings; some of this provides insights that apply to teaching in *any* age-range or setting (Gao, Luo and Zhang, 2012; Kuznekoff, Munz and Titsworth, 2015). However, the amount of research that has been carried out on the use of blogs by teachers and children in *primary* classroom environments is relatively limited despite their potential as learning tools and vehicles for communication. There is even less literature regarding the use of Twitter specifically (Barber and Cooper, 2012) and there is little research on how to integrate Twitter practically and effectively into classroom practice and school-life more broadly (Carpenter and Krutka, 2014). However, evidence suggests that social media has the potential to be a useful tool for enhancing learning in the classroom and for facilitating communication between pupils, parents and carers, teachers, and the wider community (Becker and Bishop, 2016). Therefore, it would be useful to explore the effective use of Twitter in an attempt to redress the lack of evidence in the use of social media in the primary school.

The aims of this study are to explore how social media such as Twitter is used in three primary schools in the north of England. The study adopts a qualitative, case-study approach in order to provide practical examples of how the effective use of social media can help teaching and learning in Primary Schools. This study will explore the use of blogs and Twitter in the primary school in order to identify how they are used as teaching and communication tools for pupils and teachers. The study will consider how social media has the potential to stimulate motivation, provide access to sources of information, and facilitate communication in order to promote teaching and learning in the Primary School.

Literature Review

It is recognised that Twitter can be used to encourage active learning and critical thinking with children through collaborative participation and engagement with dynamic online communities (Barber and Cooper, 2012; McWilliams et al., 2013). Most existing literature on the benefits of integrating blogs and micro-blogging into regular classroom practice falls into one of four categories. These can be categorised as: communication; resource for learning; wider engagement; and 'new literacies' (Burnett, 2010; Carpenter and Krutka, 2014).

Communication

The first of these categories for using blogging platforms as part of classroom practice regards using social media as a communication tool to extend and enhance pupil-pupil and pupil-teacher conversations (for example, through topic review activities or discussions about specific themes within a topic). It is recognised that platforms such as Twitter can be used to encourage active learning and critical thinking with children through collaborative participation and engagement with dynamic online communities (Barber and Cooper, 2012; McWilliams et al., 2013). These active interactions provide teachers with opportunities for monitoring pupil responses and for pupil-teacher interactions (Carpenter and Krutka, 2014; Van Vooren and Bess, 2013) and can readily form a component of formative feedback processes involving teachers and peers.

Resource for learning

A second category for describing the use of social media is a 'resource for learning' that facilitates teaching and learning in literacy in particular by providing opportunities for pupils to practise writing and reading in a variety of contexts (Kuznekoff, Munz and Titsworth, 2015). It is argued that editing and improving work is one of the key skills that should be taught to primary school children and that a core component of the process is the iterative experimentation and testing of 'words and the sentences to gain clarity, economy, power, coherence and flow' (Corbett, 2008, p9). This process is considerably easier to achieve when working digitally, as opposed to working with pen and paper, as children are able to instantly try out alternative phrasings. Further, the networked nature of blogs means that drafts can be worked on collaboratively, encouraging the ability to research, write and edit as a group (Zawilinski, 2009; Woo, Chu, Ho & Li, 2011). Therefore, this goes beyond the previous category of 'communication' because blogging platforms such as Twitter offer a space for critical and reflective writing practice and offer opportunities to edit and re-write previous work in ways that are different from traditional, book-based writing practice

(Merchant, Gillen, Marsh and Davies, 2012) and can have a positive impact on writing attainment across the curriculum (Kuznekoff et al., 2015).

Wider engagement

Thirdly, studies illustrate the usefulness of social media in allowing children to have a 'wider engagement' with the world outside their classroom (Waller, 2011). 'Wider engagement' can take many forms, including allowing pupils and teachers to communicate and to share work with each other and with local and global communities (Davis and Merchant, 2009; Barber and Cooper, 2012). This might take the form of pupils using a class Twitter account to share their writing with authors, or teachers using a class blog to share homework with pupils over the school holidays. Typically, the main audience of social media platforms comprises parents and carers (Carpenter and Krutka, 2014) and blogging and micro-blogging allow for a fruitful kind of 'knowledge exchange' between schools and home. This communication is not just one-way; authors can tweet back, parents can follow and reply to twitter feeds, and children can comment on blogs and each other's work (Waller, 2011). Presenting children's work in an accessible and portable format means that parents and carers can more easily continue the conversation about learning outside the school gates, which in turn can promote learning across the curriculum (Barber and Cooper, 2012).

'New Literacies'

A fourth, and arguably most significant, area concerns the benefits inherent in specifically digital texts and their usefulness in engaging with 'new literacies' (McWilliams et al, 2013; Kuznekoff et al, 2015). 'New Literacies' are new textual forms that have emerged in the last 20-30 years, primarily as a result of the expansion of digital technologies, and are distinguished by their 'distributed relationships, multiple identities, multimodality and global participation' (Burnett, 2010, p247). Whereas print-based texts are static and linear, digital texts (blogs included) are dynamic, hyper-connected and collaborative (Lankshear & Knobel, 2008; Maybin, Barton & Baynham, 2008), and active engagement using Twitter involves responding to the messages of others and the more cognitively demanding task of creating new messages (Kuznekoff et al., 2015). It follows that when engaging with new media texts, children are given the opportunity to practice and develop their usual literary skills (decoding, inference questioning and so forth), whilst also developing an entirely new set of skills necessitated by their networked nature.

The importance of engaging with new literacies, therefore, is two-fold. Firstly, engaging with 'new literacies' can raise the achievement of children in *all* subjects, not just English (Burnett 2010; Van Vooren & Bess, 2013; Becker and Bishop, 2016). To navigate these new forms of text, children need to grapple with research techniques and collaborative strategies, skills that are required across the school curriculum and outside of it (McWilliams et al., 2013). Secondly, digital texts are becoming the primary way in which children engage with texts outside school, and research has suggested that pupils can benefit from engaging with the same kinds of texts they engage with at home (Vasquez, 2004).

Of these main lines of argument promoting the use of social media in the classroom, we will argue that it is the fourth - the focus on 'new literacies' – that is most significant in terms of promoting learning in the primary school. Indeed, it could be argued that the first three areas mentioned above are offshoots of the fourth - for example, it is the specifically networked and distributed nature of digital texts that allows children, parents and teachers to engage with them at any time. The most effective attempts to integrate blogs and micro-blogs into the classroom environment draw upon the unique nature of digital texts, rather than just replicating regular pre-digital teaching with a screen and a keyboard rather than a pen (McWilliams et al., 2013; Zawilinski, 2009; Waller, 2010). These insights will be used to contextualise the findings of the research presented in this study.

The Study and its methods

This study adopts a qualitative, case-study approach (Bryman, 2004) in order to provide practical examples of the use of social media in Primary Schools. Research was carried out in a convenience sample of three primary schools in the north-west of England which acted as exemplifying cases of the active use

of Twitter for educational purposes. Data collection methods included semi-structured interviews with a purposive sample of teachers in each school about how they used Twitter and blogs in their classroom and their school, field notes of observations of classroom practice and an analysis of the online content of school and classroom blog. Research was conducted according to BERA guidelines (2011), including the use of voluntary informed consent, right to withdraw, confidentiality and anonymity of respondents.

School One is a medium-sized, two-form entry academy, where an above average percentage of pupils are eligible for pupil premium. The school already makes regular use of blogs and Twitter. Each class has its own blog and Twitter account (though the extent to which they are used varies between classes), and individual teachers have their own accounts as well. School Two, is a large three-form entry school, where a much higher than average number of pupils are eligible for pupil premium. This school makes some use of Twitter as a communication tool but it is generally not integrated into classroom practice. A few classes have individual Twitter accounts but there is no consistency throughout the school with regard to how they are used. School Three is an above-average-sized, two-form entry school where an average amount of pupils are eligible for pupil premium. The school places a particular emphasis on the use of technology in learning, and promotes blogging heavily as a teaching tool throughout the school. The majority of teachers and classes have individual Twitter accounts, and each class has its own regularly updated blog.

Data from the semi-structured interviews with staff members were recorded and analysed in a similar manner to that described by Charmaz (2002). The interviews were searched and coded to identify themes that related to how and why social media was used, the benefits of using it, and specific features and examples of its use were identified. The data from interviews were considered alongside observational data derived from classroom experience and from a scrutiny of school and class Twitter accounts with constant comparison of data, codings and themes in order to identify and explore categories that emerged from the data and the analysis using 'constant comparison' between data and emerging themes (Strauss & Corbin, 1990; Bryman, 2004). The categories which emerged from the data analysis were being informed by the previous framework drawn from the literature (for example, Carpenter and Krutka, 2014) but the analytic process used in this study led to the emergence of alternative categories to describe and explain the use of social media in an educational context.

Findings

The observations and interviews used in this study highlighted that blogs and Twitter were being used by teachers and pupils in the three primary schools in a number of different ways which broadly aligned with the four categories identified in the literature review (Burnett, 2010; Carpenter and Krutka, 2014). However, our analysis of the data proposes an alternative structure for considering how social media are used in the three schools in this study and we will present our data in three categories: social media as learning tools by pupils; social media as communication tools; and social media as professional development tools. These categories arose from analysis using 'open-coding' and 'axial-coding' the data (Strauss and Corbin, 1990). Categories emerged from the data analysis using 'constant comparison' between data and emerging themes (Bryman, 2004), which whilst being informed by a previous framework drawn from the literature, led to the emergence of a valid, alternative lens to understanding an emergent field of study.

Firstly, Twitter and blogs were being used in classrooms and outside them *by pupils* as learning tools. For example, children were writing and reading blogs or tweets as an integral part of a lesson or a homework assignment. Secondly, they were being used (primarily by staff) as communication tools – this involved sharing good work and good practice with parents, other classes and other schools. In some ways, these first two forms of use supplemented each other; as will be shown below, the technologies functioned well as teaching tools *because* they were also effective communication tools. Thirdly, they were being used as professional development and networking tools for staff: this was particularly true in the case of Twitter.

1. Social Media as Learning tools

Firstly, observational data revealed that blogs and Twitter accounts were being used as learning tools by

pupils. This was observed at all three schools, but was most prominent in School Three, where blogs were integrated into classroom practice from Early Years Foundation Stage (EYFS) onwards. For example, children in Key Stage 1 wrote profiles about themselves which they shared to the class blog. They also wrote shorter pieces on apps like 'Padlet' - a classroom collaboration tool that essentially functions as an online notice board – which were then embedded into the class blog. As children progressed through the school, they wrote long-form posts for their class blog with increasing frequency. Interviews with teachers supported observations that these blogs were effective because it gave children 'space and time to think about their writing, rather than being rushed, like you might be in a 45 minute lesson' (Teacher 1, School 3). Children in the Year 5 and 6 classes were also allowed to take their class iPads home with them to continue their writing outside school – this included writing news-style articles, reports and short stories.

Tweets were used as a direct learning tool less often – the only school that did this was School One. One example that was observed here involved children writing a tweet at the end of a lesson to succinctly sum up what they had learned: this was in a maths lesson but an interview with class teacher revealed that this technique was often used for other types of lessons and that the character limit for tweets (140 characters) ensured children 'reflected upon their learning' and used language precisely (Teacher 1, School 1).

Another example of using social media as a learning tool was observed in analysis of a conversation in the comments section of a class blog from Year 4 in School One, in which pupils discussed the inner workings of the ear in great detail following on from a science lesson. During the analysis of the data, this example emerged as an illustration of how the categories of 'meaningful engagement', 'resource for learning' and 'new literacies' identified in the literature review merged to reflect the use of social media as a learning tool. The activity involved pupils debating knowledge and sharing links to the correct information, asking for feedback, and reflecting on what they had learned. In the course of an interaction like this one, pupils 'gather information', 'critically evaluate' arguments and questions, and practise their 'communication and research skills'. Previous studies have identified how networked, collaborative interactions provide repeated opportunities for critical and reflective writing practice in a space that encourages editing and re-writing and promotes learning about writing and about the topic (Zawilinski, 2009; Woo et al, 2011) and this study demonstrates that these features can be utilised in a Primary School context. When blogs are being used in this way, pupils are given the opportunity to practice reading and comprehension skills, but also 'higher order thinking skills of analysis, synthesis and evaluation' (Zawilinski, 2009, p. 654).

Data from the observations and interviews used in this study reveal that pupils connected with many of the features of 'new literacies' identified in the literature review by using distributed activity within and beyond the classroom and by employing the dynamic, connected and collaborative features of social media to actively engage with other users and to develop their own learning about communication (Lanksheer and Knobel, 2008; Burnett, 2010; Kuzenekoff et al, 2015).

2. Social Media as Communication tools

Analysis of the data suggested that the second way in which the technologies were used in the three schools was as a *communication* tool. Observations of social media activity and classroom practice revealed that where blogs and Twitter accounts were not actively used as teaching tools, they were instead used to share and discuss pupils' work with a larger community. They were also used to provide information to parents about trips, assemblies and other events as traditional newsletters might, but the use of social media went beyond this; for example to share homework and feedback with pupils and parents (most notably in School One). Observation in School One showed that multidirectional interaction is fostered is through the use of 'comments' on blog posts. These comments came from other teachers ('Hope you got lots of inspiration for your narrative writing'), parents of the children in the class ('Looks like you all had a lovely time. Glad the rain kept off!'), and even former pupils ('I hope you had a good day I remember

when I did that and I loved it!').

A common theme from data derived from interviews with teachers in School One and School Three was that comments like these were the main reason they used these technologies – to share pupil work with a wider audience, and to raise motivation for writing in the process. Interviews and observations revealed that this 'wider engagement' and dynamic 'communication' (Davis and Merchant, 2009; Barber and Cooper, 2012), although in some ways constituting distinct reasons for using social media, tended to merge with additional factors, such as the motivation of children, providing contexts for communication and as vehicles for practising 'new literacies'. As an example, one teacher summed up the attitude towards using blogs to communicate, saying:

knowing that we're going to write a blog post about our work then tweet it at a famous author really motivates all the children, and they put extra effort into their work whenever they know it's going to be shared

(Teacher 2, School 1).

The IT Lead at School Three also said he actively worked with parents to get them to comment on blogs, often asking them whilst they were picking up their children in the playground. He had also spent time advising teachers, parents and pupils on how to write comments that were useful and prompted further learning, in order to encourage further debate and discussion in class.

Twitter was highly valued as a communication tool. For example, a Year 6 teacher in School Two had used the school's Twitter account to share videos of the school's nativity play and pantomime, as well as interviews with parents on school 'communication days' so as to share this content with parents and family members who could not be present for these events. The teacher said:

[the pupils] really like sharing this stuff with their parents, and it works especially well for kids who have parents... who don't usually come to communication days or class assemblies. They go home and show their assembly to their mum, their dad, and come back the next day telling you how proud they were to see it.

3. Social Media as Professional Development tools

The third way in which Twitter and blogs were used was as a professional development tool. This study was intended to look for ways to use these technologies in a student-facing way to directly promote pupil learning. However, this additional theme emerged from the data gathered from interviews with teachers in the three schools as they explained ways that blogs or Twitter could facilitate the professional development of teachers and thus have a significant effect on teaching and learning within school (Suk Yoon et al., 2008, Goodall et al., 2005). Indeed, the interviews recorded that the majority of teachers who used blogs or Twitter in this way (that is, most of the teachers at School Three and several of the teachers in School One) said that professional development was the main reason they maintained professional Twitter accounts that were separate from the ones that they used for personal, social reasons. A teacher at School Three said: 'I wasn't brought up with Twitter or any of this technology... but I've got more from Twitter in the last two years than any staff meeting I've ever been to'. The head teacher at the same school echoed these feelings, saying: 'it's the best form of CPD going... it allows you discuss, follow, the best of the best... to magpie the best ideas from them'. This head teacher advocated the use of a professional 'reflective' blog, which he said had helped teachers analyse their own classroom practice and identify areas for improvement that they might not have otherwise noticed. In much the same way that pupils were motivated to improve their writing, this head teacher argued that having a wide, webbased audience encouraged teachers to be more reflective and critical than they would be if only writing for themselves.

Interviews with the teachers who used Twitter as a development tool recorded that they frequently and

widely used features unique to the platform such as the use of hashtags (easily searchable keywords that direct users to tweets regarding certain topics or events) to share information about conferences, training sessions and best practice with a wider network of teachers. In addition, they used networking and participatory features such as Twitter's sharing functions, 'retweeting' and 'favouriting' tweets to increase the availability of the information and to take advantage of what Burnett, 2010, p247) identifies as the 'distributed relationships, multiple identities, multimodality and global participation' features of social media.

The findings from this study support and extend previous research (for example, Carpenter & Krutka, 2014) and clearly show the breadth of different ways in which blogs and Twitter accounts are used, and the different motivations teachers have in using them. This study provides support for claims that integrating blogs into regular classroom practice has a number of benefits, including acting as a resource for learning, providing opportunities for communication, facilitating wider engagement in classroom activities, and providing opportunities for the development of 'new literacies' (Burnett, 2010; Carpenter and Krutka, 2014). This study reveals that the benefits of using social media occur in three main fields of activity in the Primary School: learning tools for pupils; vehicles for communication; and as professional development tools for teachers.

Discussion and recommendations

These findings support previous research about what constitutes effective practice in blogging and tweeting in educational contexts and how this can contribute to promoting teaching and learning. In addition to the ways in which social media were used in the three primary schools in this study, data from observations and interviews provided support for recommendations as to how to harness the potential of social media to enhance teaching and learning in a primary school. These recommendations arise from consideration of previous studies and draw upon findings that emerged during analysis of the data collected in this study.

1. Maximise the potential

This study and previous literature show that social media such as Twitter can enhance teaching and learning in primary schools by being used as a resource for learning, by creating opportunities for communication, by encouraging wider engagement in activities, and by the development of 'new literacies' (Maybin, Barton and Baynham, 2008; Kuznekoff et al', 2015). Findings from this study suggest that use of social media appears to be most effective as learning tools and communication tools when their hyperlinked, distributed, accessible nature (specifically the aspects that mark these mediums as forms of 'new, digital literacies') was used to its full extent. This was done particularly well by School Three, whose teachers also reported the biggest boost to pupil motivation and writing quality. Certain class blogs from School One were also successful in this way. Their blogs were not simply single 'bursts' of information, rather, in the most sophisticated instances, the comment sections of these blogs evolved into conversations between pupils, teachers and the wider community. It is this active interaction and personally meaningful engagement for the pupils that offers the potential to raise the achievement of children (Van Vooren & Bess, 2013; Becker & Bishop, 2016).

In much the same way, evidence from interviews with teachers in this study suggested that professional Twitter accounts and blogs function well as a professional development tool due to the dynamic, democratic way in which articles, lesson ideas, resources and other types of content can be shared (Carpenter and Krutka, 2014). Effective practice involves using the features unique to Twitter (hashtags/retweeting) to share information and find information quickly. In addition, teachers using Twitter and blogs effectively had entered into discussions and formed networks with teachers around the country and overseas, rather than just composing their online network of the people that share the same physical space. This combines the new 'networked, multi-modal literacy' of Twitter (Merchant et al., 2012) with the ability to build multi-nodal communities to share and disseminate practice (Carpenter & Krutka, 2014). Using Twitter, practice was shared and evaluated constantly amongst a wide variety of practitioners, thus increasing the

potential effectiveness of this kind of professional development (and the subsequent impact on the achievement of children). As this method of engaging in online professional development does not rely on practitioners being together in the same physical space and at the same time, Carpenter & Krutka (2014) suggest that this helps to overcome some of the limitations of traditional professional development (for example, Goodall *et al.*, 2005).

2. Integrate into school life

Motivation to participate and engagement in the activities have been shown to increase when participants perceive their contributions to be appreciated and valued by other members of the community (McWilliams et al, 2013; Becker and Bishop, 2016). The findings from this study show that the best way to achieve this is to fully integrate Twitter accounts and blogs into classroom life, ideally all the way throughout the school, in a consistent manner that both staff and pupils are aware of. School One was the exemplar for this kind of practice with regards to Twitter. Every class in the school, from EYFS to Year 6, had a regularly updated class Twitter account that was being used in broadly the same way. As the practice was embedded as part of school life in EYFS, children could move progress through the school knowing that there is a constant online audience of peers, teachers, parents and other schools to share their work with. The knowledge that they could then share work immediately with significant figures in the pupils' lives, and to then receive timely feedback from these figures, has a notable impact on pupil motivation and achievement (Waller, 2010; Davies, 2006).

The same characteristics defined the best blogs and Twitter accounts being used for professional development – they were integrated into the professional life of the school and used frequently. Ideally, staff would have their own 'professional' blog or Twitter account running alongside any shared class one; again, this was the case at School One. The same view was put forward by the IT Lead at School Three in reference to blogging. His blog had been developing for over five years, and had evolved from a simple reflective 'journal' mostly written for his own purposes into a public forum to share reflections, resources and practice. This is important, as Professional Development which involves teachers 'analysing and reflecting on their practice over a sustained period' has been shown to have significant effects on the achievement of children, with particular impact on the achievement of children from disadvantaged backgrounds, helping to close the achievement gap in the process (Day 2015).

A combination of reflective blog posting and ongoing 'in the moment' micro-analyses of practice on Twitter can be of enormous benefit in this regard (Carpenter and Krutka, 2014).

3. Multi-use, multi-purpose

The Twitter accounts and blogs that engaged students most effectively were ones which were multipurpose, and functioned as communication tools, learning tools and (to some extent) CPD tools at the same time. They routinely had higher numbers of followers, retweets and comments than ones that did not, indicating a larger audience of parents, teachers and pupils that was more engaged. On the contrary, the least effective blogs and Twitter accounts were ones that isolated themselves to a specific function and did not engage with the sharing and networking affordances of the medium. For example, the Twitter account at School Two, which was generally only used as a one-way communication tool, had the lowest number of followers of any of the accounts studied (246 at the time of writing, compared to 326 followers for the Year 6 account alone at School One). Crucially, this meant it was having little impact on the achievement of children – none of the children in any of the Year 3 classes appeared to know that the school had a Twitter account. Where it was known about (primarily in year 6) pupils and teachers found that it helped improve motivation for writing, as per the teacher's comments mentioned above.

Conclusion

This study supports previous research that tweeting and blogging can be used to encourage effective learning for children (for example, Van Vooren and Bess, 201; Carpenter and Krutka, 2014) but it is important to recognise that although the learning activity uses Twitter, the activity is not about Twitter

and therefore blogging is a tool rather than an object of learning (McWilliams et al., 2013). It is worth noting that teachers do not need to be expert Twitter uses to employ these types of learning activities as their role is to connect the activities to the wider aims of the topic and to organise the learning and learners so that they can use this tool to facilitate discussion and exchange of ideas (McWilliams et al., 2013).

This study is an exploratory study using three primary schools from the north of England as case studies and we recognise that the practice that has been evidenced may not be representative of practice in primary schools elsewhere. In addition, this is a small-scale, qualitative study and therefore there are limitations to how far the findings from this type of study can be generalised. Although we recognise the limitations of such a study, we believe that the findings from this study provide evidence and examples of how social media is used in the schools in the study and that insights from this data can be drawn to inform professional practice in the wider context.

This study supports previous studies (for example, Becker and Bishop, 2016; Carpenter and Krutka, 2014) of what constitutes effective tweeting and blogging practice. Firstly, using the uniquely digital features of Twitter and blogs was the most important way to improve their effectiveness as teaching tools, communication tools and professional development tools. Secondly, the technology was most effective as a teaching and communication tool when it was used regularly in classroom practice and integrated throughout a school, as children knew they would always have a virtual audience with whom work could be shared. Thirdly, the most effective blogs and Twitter accounts were ones which combined features of communication tools, teaching tools and development tools. The accounts which effectively motivated and raised the achievement of children were ones which provided an audience to show to work as well as a reflective place to write and share work.

We have presented evidence drawn from three primary schools in the north of England to show that the use of blogs and Twitter can be used as teaching and communication tools for pupils and teachers. Our study has revealed that social media has the potential to stimulate motivation, provide access to sources of information, and facilitate communication in order to promote teaching and learning in the Primary School. Social media offers opportunities for dynamic and collaborative 'new literacies' which have the potential for hyper-connectivity and active engagement between children, teachers and other users of social media. We have shown that children can actively engage with social media in, and beyond, primary classrooms to practise and develop their usual literary skills whilst also developing an entirely new set of 'new literacy' skills.

We believe there is sufficient evidence from previous studies and this paper to support claims that the use of social media as tools for learning, communication and professional development can have positive impacts on primary school practice. It is clear that social media has the potential to enhance professional practice and pupil learning but we recognise that further studies are needed to explore the extent of such impacts on pupil learning and to explore the practicalities of using social media in primary schools. However, this is an exploratory, small-scale study and further research into the detail of how social media can facilitate learning for children in specific aspects of the curriculum would be useful.

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