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## Using mobile phone texting to support the capacity of school leaders in Ghana to practise Leadership for Learning

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### Abstract

Several years into a collaborative professional development programme to build the Leadership for Learning capacity of Basic school headteachers throughout Ghana, the challenge is to sustain commitment, deepen understanding and share learning among the school leaders. Employing ubiquitous mobile phone technology, weekly text messages have been sent to the programme's 175 initial participants. During the year of the pilot project different forms of messages have been tried, and feedback from recipients suggests their value. The paper reports experience and findings from the pilot, and considers plans for scaling-up to reach all 18,000 Basic schools across the country.

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## 1. Introduction

Scalability and sustainability are issues central to many educational reform efforts, not least a programme of professional development to support school leaders in Ghana, in the west of Africa. Three years into the programme we started experimenting with mobile phone texting (Short Message System or SMS) as a way of maintaining regular contact with 175 core participants. This paper begins with a brief overview of the programme, followed by a review of literature relating to the use of SMS, before reporting our experience of using text messages in different ways during a year-long pilot. We analyse the types of message sent and the replies received, discuss what we have learnt and consider the possibilities for using SMS to support thousands of headteachers.

### *1.1 The Leadership for Learning Ghana programme*

Internationally headteachers (ie school principals) are recognised as pivotal to school improvement (Robinson, Hohepa & Lloyd, 2007), and research in Ghana (Oduro 2008; Zame, Hope & Respress, 2008) has identified the lack of leadership preparation and ongoing professional development in the country as key issues. Since 2009 the Centre for Commonwealth Education at the Faculty of Education, University of Cambridge (<http://www.educ.cam.ac.uk/centres/cce/>) has been working in collaboration with the Institute for Educational Planning and Administration at the University of Cape Coast, Ghana to address this need. The Leadership for Learning (Lfl) programme in Ghana (MacBeath, Swaffield, Oduro & Ampah-Mensah, 2012) aims to enhance the leadership capacity of headteachers in kindergarten, primary and junior-high schools (collectively known as Basic schools) and thus improve the quality of learning. It is based on a framework developed through an international project (MacBeath & Dempster, 2009) which has at its centre five principles for practice, namely: a focus on learning; conditions for learning; dialogue; shared leadership; and a shared sense of accountability.

15 Ghanaian ‘Professional Development Leaders’ (PDLs) comprising lecturers from the University of Cape Coast and other higher education institutions, officers of the Ghana Education Service (GES), and a headteacher undertook an accredited course at the University of Cambridge during which they considered the applicability of Lfl to Ghana and prepared to lead programme workshops. An initial cohort of 124 headteachers from all over Ghana attended a residential workshop in 2009, reconvening in 2010 and 2011 to share their experiences, provide mutual support and continue learning. Other key groups particularly circuit supervisors and district, regional and national directors were also introduced to Lfl, and through these early participants many other headteachers became involved. The GES adopted the Lfl framework as national policy and incorporated it into its headteacher handbook. It is estimated that over 3,000 school leaders throughout the country have now attended sessions on the Leadership for Learning principles. While official activity accounts for much of this expansion many of the original cohort of headteachers have also shared their knowledge and experience with local colleagues. We were keen to encourage this organic spread while being concerned that the fidelity of the framework and principles should be maintained as practice adapted to local circumstances. Continued support for the first group of leading edge headteachers seemed essential but more face-to-face meetings were impossible. Printed newsletters (which continue) are welcomed but are infrequent and expensive to produce and distribute.

We therefore began to consider the possibilities of using mobile phone texting to support the capacity of school leaders in Ghana to practise Lfl.

## 2. The use of SMS to support professional development

Across large proportions of Sub-Saharan Africa people rely on mobile phone technology and in particular SMS for daily communications. In Ghana mobile phone penetration could be described as 100 per cent since subscriptions reached 24.4 million in 2012 (ITWeb Africa, 2012), nearly matching the national population of 25

million. Mobile phones and SMS are the preferred method of communication in Ghana as in other countries in the region, with only 14 per cent hard line internet access (Ghana Internet Service Providers Association, 2013).

SMS has been used to deliver a number of services in developing economies with good success, especially banking services (Porteous, 2006; Peevers & Douglas, 2008) and to support population health programmes and clinical trials (Armstrong et al., 2012; Dean et al, 2012; Ollivier et al., 2009). Education and SMS is notably absent from the research literature, save for a few research projects spanning the last decade and an emerging interest in the opportunities that have, as yet, remained underdeveloped (Kidd & Murray, 2013; Ford & Batchelor, 2007; Traxler & Dearden, 2005; Traxler, 2007; Visser & West, 2005; Valk & Rashid, 2010). The case for integrating SMS in education to support learning and professional development has largely arisen from the work of non-governmental organizations (NGOs) such as Front-line SMS (<http://www.frontlinesms.com/>) and English in Action (EIA) (Walsh & Power, 2011; Walsh et al., 2013).

Walsh et al.'s (2013) recent paper reviewing the work of EIA highlighted the potential of mobile phones for supporting increased access to professional development, citing the ubiquity and cost effectiveness of the technology as a key rationale. The benefits of using mobile technology and infrastructure for creating professional development opportunities are clear, yet it has not been widely used for this purpose. In part this may be because, as Ramli, Ismail and Idrus (2010) point out, effective professional development is about more than simply providing access to resources (important as they are) and providing a conduit for communication. Practitioners need to be continually applying their learning in practical situations, to adopt a spirit of enquiry, and to reflect on experience, all in the context of collaborative learning. Meaningful interactions among colleagues and with critical friends and supportive frameworks are key. Duncan-Howell (2010) reported teachers participating in online communities spending up to three hours a week engaged with CPD, but as Walsh and colleagues pointed out these web-based discussion forums require easy, reliable and affordable internet access. Similarly, the lack of ICT infrastructure constrains use of the Open Education Resources (OER) available through the Teacher Education in Sub-Saharan Africa project (Harley & Simiyu Barasa, 2012). Accepting that there are differences in what can be achieved through e-learning that includes regular access to email, video content, video conferencing and so forth in regions where this technology is widely available, we imagined that benefits could be achieved through text messaging alone using simple mobile phones.

### **3. Piloting text messaging in Ghana**

In March 2012 we began sending weekly text messages to core participants in the LfL programme. The recipients comprised 116 headteachers (the original cohort allowing for attrition through death and redeployment), 36 circuit supervisors and 23 others including the Professional Development Leaders, Ghana Education Service Directors, and members of the research teams in the Universities of Cape Coast and Cambridge.

The video, voice and text messaging service Skype was used to send and receive text messages. Skype was chosen as it was a cost effective solution that offered the functionality required of the pilot, namely, to send and receive messages to large numbers of recipients efficiently with the opportunity to maintain a record of activities over time. The messages were typically 30 words / 150-160 characters in length. A Skype account called LfL Ghana was established, enabling recipients to clearly identify the source of messages, and to ensure they could text or call replies.

The pilot study came to an end in April 2013, transitioning to a monthly information sharing service while the outcomes of the pilot were reviewed and a proposal for an expanded and extended SMS programme finalised.

### 3.1 Messages sent

43 messages were sent during the year's pilot study beginning in March 2012. They were sent on Monday mornings during the Ghanaian school terms.

The focus and wording of the messages were worked out through dialogue among the LfL teams in Cambridge and Cape Coast, with the programme researcher and co-ordinator taking the lead. We agreed that the initial messages would focus on the five LfL principles; thereafter we developed the texts predominantly through experimentation and response to circumstances. The messages created fell into five categories: announcements; prompt to thought or action; request for feedback – open; request for feedback – 'yes'; and sharing participant response. The totals and percentage of each type of message, together with two examples of each type for illustrative purposes are given in table 1.

Table 1. Types, numbers and examples of messages sent (with message number and date)

Category	Example 1	Example 2
Announcements n = 12 ie 28%	SMS5: Welcome to the 3rd term! We hope you had a restful holiday. We wish you the best in Leadership for Learning this term! A new Monday message coming next week. (02/05/12)	SMS41: LfL Ghana shared your story at the 'Year of Ghana Conference' in Atlanta, USA. Participants were impressed at your hardwork. Keep it up! Keep the LfL flag flying. (25/03/2013)
Prompt to thought or action n = 9 ie 21%	SMS7: LfL Ghana supports Shared Accountability across the whole school: What are you doing this week to encourage a shared responsibility for learning? (14/05/12)	SMS23: LfL Ghana believes in Critical Friendship as a tool for effective school leadership. For this week, we want you to reflect on the qualities of a critical friend. (15/10/2012)
Request feedback – open n = 13 ie 30%	SMS10: LfL Ghana wants to know what YOU think is the biggest change in your school/classroom since starting with Leadership for Learning? We'll share results next week! (04/06/2012)	SMS34: Good morning! How could Monday messages help you more from week to week? What leadership topics/issues would you like to discuss or share? (21/01/2013)
Request feedback – 'Yes' n = 3 ie 7%	SMS27: LfL Ghana is now in over 2000 schools across Ghana. Reply YES if you have shared your LfL expertise with other Headteachers (12/11/2012)	SMS20: LfL Ghana is looking for BIG IDEAS on how to develop shared leadership with teachers. If you have an idea, reply YES and we will contact you. Thank you! (24/09/2012)
Sharing participant responses n = 6 ie 14%	SMS14: LfL Ghana wants to share a msg we received: "The greatest change in my school is teachers' attitude towards work... with BECE results up... 54% to 81% since 2009" (03/07/12)	SMS25: LfL Ghana shares this response to last week's msg. I've adopted 2 schs around me. I share the good news with them. I also take advantage to share some good practices with heads I get into contact with. (29/10/12).

The categorisation of messages is a retrospective analysis to summarise the types of messages sent, although the categories are not entirely mutually exclusive. For example SMS8 '*LfL Ghana wants to share this text from an STL*<sup>†</sup>: "Use yourself as a practical example to demonstrate leadership and learning for others." What do you think? (21/05/2012)' both shared a response and prompted thought. Other messages could be classified or interpreted in different ways. This was particularly the case with those messages that were prompts to thought or action (for example SMS7 in table 1 above), which initiated feedback even though this was not their original intention.

<sup>†</sup> STL = School Transformational Leader, the term adopted for themselves by the initial cohort of headteachers in the programme.

As we experimented with different types of messages and responded to circumstances some patterns in the types of messages sent developed. Most obviously, ‘announcement’ messages were typically sent at the beginnings and endings of school terms, although in addition these kinds of messages were sent as the need or opportunity arose, for example to announce the death of a leading member of the programme and to inform everyone of LfL Ghana programme developments such as workshops for District Training Officers. The first messages sent (SMS1-4 and 6&7) focused on the LfL principles, prompting participants to think about and hopefully extend their current practice. These initial messages were phrased as questions without explicitly asking for responses, and we were pleasantly surprised to receive unsolicited feedback. We therefore started sharing some of the participants’ responses (SMS 8&9) and directly requesting their ideas (initially SMS10, 11, 13). Mindful that recipients could only send text replies at their own personal cost we experimented with the form of feedback request, on occasions (SMS 20, 27, 29) asking for a simple ‘Yes’ reply. The first of these messages asked for ideas about how to develop shared leadership with teachers, and said that a ‘yes’ reply would initiate contact for further details. The programme co-ordinator in Ghana then made telephone contact with each of the respondents, which proved to be difficult and time consuming. Subsequent ‘reply yes’ messages were used without a promise of follow-up to seek feedback about (and also indirectly prompt) the prevalence of an aspect of practice (sharing LfL expertise with other headteachers), and to gauge interest in developing the text messaging service (by the opportunity to text other headteachers directly).

### 3.2 Responses received

All but two of the 43 messages sent during the year generated text responses from recipients, even though only 16 of the messages (37 per cent) were explicitly designed to do so. In total 390 text replies were received, giving a mean average of nine replies per message. One message (SMS27) elicited 42 replies, the greatest number received in any one week. Not surprisingly this text was in the form ‘reply yes’, and the other messages that prompted particularly large number of responses (SMS21&31) were the other two of this type. The 13 messages that requested open feedback generated an average of nine replies each, with the totals for individual messages ranging from four to 18. Replies to the ten messages that were prompts to thought or action, and the six that were sharing participants’ responses to previous messages were fewer, although as explained above some of these also prompted thought (‘... What do you think?’) and could also have been interpreted as a direct request for feedback. The 12 announcement messages precipitated a total of 60 replies, an average of five per message although there was considerable variation. 14 people responded to the news of the death of one of the Professional Development Leaders, expressing their shock, condolences, and appreciation of his work.

Responses to announcements were typically expressions of thanks; quite a few people replied to seasonal greetings in similar vein. Two of the open feedback messages (SMS26&33) explicitly asked for programme participants’ views about the text messages. The 16 responses were all positive, welcoming the regular texts as reminders of the LfL principles and practices, as in: *‘Messages we get from LfL Ghana serve as buck-ups that refresh our minds on the five principles’*. The SMS messages were described as *‘... highly inspiring and motivating’*, and for some at least reduced the sense of isolation: *‘It also brings us closer to our coordinator/ PDLs even though we are apart’*. Only three participants mentioned anything about short-comings of the messaging system: *‘... at times you may not see the message early enough to reply’*; *‘what is not good is that sometimes it comes in broken messages which entails missing texts’*; and *‘using SMS much cannot be discussed’*. This latter point resonated with the 31 positive replies received in response to SMS29: *‘LfL Ghana wants to know if you would like to have the opportunity to text other Headteachers about LfL through our messaging system. Reply YES if you do’*.

The majority of the 390 replies focused on details of the Leadership for Learning programme and the way the participants were putting the LfL principles into practice: detailed analysis of their content is beyond the scope of

this paper. Beyond the one word replies 'yes' and 'thanks', responses ranged in length from a few words, to a sentence or two, to quite extended paragraphs. The longest reply received was 117 words (728 characters).

The patterns of replies from different categories of participants are shown in table 2. 71% of all participants responded at least once, although there were differences among the groups with 66% of headteachers and 69% of circuit supervisors doing so compared with 100% of those in the 'others' category. However, it was among the headteachers that the most frequent respondents were found, with 14% of them replying more than six times and 7% sending more than 10 responses in the year. The most prolific respondents were headteachers, with one replying to 26 of the 43 messages sent.

Table 2. Responses by group

	Headteachers		Circuit supervisors		Others*		All participants	
Number of recipients	116		36		23		175	
Total number of replies	304		60		26		390	
Average number of replies	2.6		1.7		1.1		2.2	
Replied at least once	76	66%	25	69%	23	100%	124	71%
Replied 1-5 times	60	52%	23	64%	23	100%	106	61%
Replied 6-10 times	8	7%	2	6%	0	0%	10	6%
Replied more than 10 times	8	7%	0	0%	0	0%	8	5%

\*Professional Development Leaders, Ghana Education Service Directors, University Staff.

#### 4. Discussion

A year of experimenting with text messages in the context of the LfL programme in Ghana convinces us of the value and potential of supporting professional practitioners in this way. Our pilot had a number of limitations, not least the lack of an evaluation process that systematically gathered feedback from all the participants and related participation to a range of professional development outcomes particularly student learning. Nevertheless through reflecting on the experience and reviewing data generated we are able to contribute to the small but growing body of research knowledge in the area, and have learnt a number of lessons to inform our continued support of the LfL Ghana programme.

Ubiquitous mobile phone ownership and network coverage throughout Ghana, together with what is now considered fairly basic communication technology, provide the means for cheap and reliable messaging with large numbers of school leaders. There are however practical issues and time requirements for setting up the recipients' phone numbers in the Skype messaging system and for administration. Wording concise messages takes practice, and although the ambiguous nature of some of our messages yielded unexpected benefits (as in alerting us to the readiness of recipients to respond), in retrospect we could have been clearer about the precise purpose of each message and ensured the wording conveyed that purpose. Nevertheless we were able to send weekly messages that had the potential to sustain commitment, deepen understanding and share learning among the 175 core participants of the LfL programme.

Perhaps the most important finding from the pilot is that nearly three-quarters (71%) of participants replied at least once, indicating that SMS is a practical method of communication with school leaders in Ghana. However, we do have to be cautious in drawing conclusions and interpreting patterns of responses. In particular we do not know how to interpret the complete lack or paucity of responses from individuals: it may be that our messages were not received, that the cost of replying was prohibitive, that participants were fully committed to practising LfL in their schools but did not wish to send text messages themselves, or that some school leaders were disengaged. Responses to direct requests for feedback about the messages were overwhelmingly positive, and suggested that the messages provided a sense of community, valued direct and frequent connection to the co-

ordinator at the University of Cape Coast, and helpful reminders of key aspect of the programme. Whilst recognising that in any group there will be individual differences we continue to be heartened by the desire of a number of headteachers in particular to communicate, some responding fulsomely even to simple end of term greetings. We are convinced that regular text messaging supports the engagement and commitment of LfL programme participants, aids programme fidelity, and has the potential to enhance learning through the sharing and development of practices.

## 5. Looking ahead

Our challenge now is to build on the experience of experimenting with text messaging as a means of supporting school leaders and find a way of extending it to many more school leaders across Ghana. We are currently working together with the SHM Foundation (<http://www.shmfoundation.org/>) to develop a system that is scalable, sustainable, and meets the LfL programme participants' expressed desire to be able to communicate directly with one another. The proposed model is based on considerable work already undertaken by The SHM Foundation in using SMS in this way. Multiple small groups of say 12 headteachers would be established, each with a more experienced facilitator who would be attached to a total of 15 headteacher groups and who in turn would belong to a support group with 15 others aided by a senior facilitator. This approach would allow approximately 3000 headteachers to join a small support group with whom they could interact directly via SMS, and through the facilitators could be in contact with the LfL Ghana programme co-ordinator, Professional Development Leaders and university teams. A six-fold replication would have the potential to include all 18,000 Basic school headteachers across Ghana.

There is much work to be done to bring this vision to a reality, not least to secure the funding necessary for such a large-scale, albeit cost effective, model of on-going professional development support and LfL capacity building. All our experience, and particularly the dedication, enthusiasm and commitment of educators throughout Ghana and at all levels of the system, suggests the value of the endeavour and prospects for success. The infrastructure, systems and communication habits developed would be a strong foundation for future more multi-media ICT-supported professional learning if smart phones and broadband internet connection become common in Ghana. No doubt there will be considerable difficulties to be overcome, but mobile phone technology could be the key to quality learning in Ghanaian schools where the LfL principles of a focus on learning, conditions for learning, dialogue, shared leadership and a shared sense of accountability are embedded and sustained.

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