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MSc in Information Systems and Technology

Project Report

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The impact of local government social media posts on engagement with citizens

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Declaration

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Abstract

This project explores how different attributes of social media posts by local governments impact engagement with citizens. Previous research has indicated that governments using social media benefit from increased engagement with citizens, which has the potential to transform government-citizen relations. To date, little research at the local government level has focused on what it is about the use of social media that drives increasing engagement.

Extending on previous research by Bonsón et al. (2015), this study helps to fill that gap by examining the impact of different topics, media types, and intents of Facebook posts on engagement level and type at the local government level in the United Kingdom. Content analysis of Facebook posts paired with quantitative analysis is used to explore the research questions. Questionnaire responses from officials managing council Facebook pages – analysed through qualitative thematic analysis – provide further context.

The results show that photos and videos encourage greater engagement, and illustrate the importance of monitoring by governments to track the most engaging topics. The research also finds scope for governments to take a more active role in planning engaging posts and seeking citizen feedback. Further implications for local governments and future research are discussed.

Keywords: e-Government, social media, engagement, local government, Facebook

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Chapter 1: Introduction and Objectives

1.1: Background

The use of social media by individuals is becoming ubiquitous, both in the UK and around the world (Office for National Statistics, 2013). However, it has moved past use purely by individuals, with organisations increasingly establishing social media presences in order to reach out to people. Businesses have widely adopted social media, eager to reach out to customers (Barnes et al., 2012). Government's presence on social media – social networking sites in particular – has become extremely commonplace as well, at all levels of government. (Bonsón et al., 2015).

However, research has suggested that local governments might be less effective users of social media (Ellison and Hardey, 2013), making them an interesting perspective in which to study. Local governments often have greater amounts of citizens participating directly than at the national level. At the same time, they operate at a smaller scale, which makes those greater amounts of participants easier and simpler to handle (Mossberger et al., 2013).

Social media use by government fits into the broader story of adoption of e-Government (electronic government) practices. e-Government aims to utilise technology – the Internet in particular – to deliver government services and administration that once would have been delivered in a more traditional paper-based fashion (Dixon, 2010). Moon (2002) and Dixon (2010) argue that the evolution of e-Government can be divided into five broad stages.

The beginning stages mainly focus on small shifts in government efficiencies – Stage 5, 'political participation', is where there is a real opportunity to have an enormous impact on how the public engages with government in general (Sinclair and Le, 2007). One of the tools best served to make an impact here is social media.

Linders (2012) discusses how social media can help move e-Government from representing the 'citizen as customer' to representing the 'citizen as partner'. In other words, citizens can begin to have a more participatory and interactive relationship with government – they can become more engaged. Indeed, research has shown that the use of social media by local government has the capacity to increase citizen's engagement (Ellison and Hardey, 2013).

However, what is less clear is *what* it is about local government's use of social media that encourages engagement – in other words, how can local governments tailor their use of social media to encourage engagement from citizens? Bonsón et al. (2015) have performed some limited empirical examination of this, looking at what impact *media type* (e.g. photos, videos, text) and *topic* (e.g. housing, transport) have on engagement. There remains scope here to consider other factors, as well.

One such factor is discussed by Hand and Ching (2011) – can governments implicitly limit the level of engagement they get based on the *intent* of a post? In other words, does a post that simply provides information provoke the same level of engagement as a post that invites comments or a post that invites citizens to provide their feedback in another manner offline? This *intent* of a post is an interesting factor to consider, alongside *media type* and *topic*.

When considering how these various factors impact engagement among citizens, an important point to consider is the different forms of engagement and whether these factors promote certain forms of engagement over others. For instance, is the engagement simply *base-level* (perhaps by liking a post on Facebook), is it *one-way* (a citizen posting with no government response), is it a *dialogue between citizens and government*, or is it a *dialogue between citizens*? The research done thus far has not considered these different types of engagement alongside the attributes of posts (e.g. *media type*, *topic*, *intent*); this is a useful and intriguing addition.

1.2 Research Question

With these gaps in the research in mind, this study endeavours to answer this research question: *How does social media content posted by local government encourage engagement with citizens?*

To address the research question, the following Aim and Objectives have been adopted.

1.3 Aim

To discover what impact various attributes of social media posts by local governments have on encouraging differing forms of engagement with citizens.

1.4 Objectives

- Discover what impact different *media types* (e.g. photos, videos, links, text) in posts has on engagement level and type
- Discover what impact different *topics* (e.g. housing, transport, education) in posts has on engagement level and type
- Discover what impact the *intent* (e.g. deliver information, request comments, encourage offline engagement) of posts has on engagement level and type
- Explore how government officials managing social media attempt to encourage engagement with citizens and how well they feel they are doing so
- Develop best practice recommendations for local government in encouraging engagement with citizens

1.5 Scope

Limited time and resources mean that only local governments in the United Kingdom have been studied – thus, care will need to be taken when generalising the results to other countries. Since not all local authorities could be examined, this study endeavoured to examine a representative sample across the UK.

In addition, although care has been taken in selecting a representative sample of UK local authorities to send questionnaires to, there is a chance that replies received are not

representative of the whole UK. There may be some bias in the responses as far as local authority size and location.

This research also examined only Facebook posts by government, rather than incorporating other platforms such as Twitter. While the researcher believes this to be an appropriate choice, since Facebook has the largest number of UK users of any social media platform, it may nevertheless impact the result's generalisability (Ofcom, 2014).

1.6 Outputs & Beneficiaries

This research has resulted in this written project report, documenting the entire research process. The report also contains a set of recommendations for councils in how best to utilise social media to encourage engagement with citizens.

The research is likely to be of particular benefit to officials working in local government, as they can make use of the recommendations to tailor their use of social media to better engage with citizens. Current research has so far indicated that there is a great deal of room for improvement in how local governments utilise social media; this will help guide officials in making some of those improvements.

The research in local government's use of social media for citizen engagement is currently fairly limited – robust empirical research in particular. This means it will also be of benefit to other researchers in e-Government, who can build off its findings and expand its scope for future research. Other studies, including ones this research is based on, have had an international focus – this project's focus on the UK will be able to provide a useful in-depth look at the UK.

1.7 Methods

1.7.1 First Phase

In order to address the research questions, this project has been split into two phases. The first phase expanded upon the study by Bonsón et al. (2015). It examined the impact that the *intent*, *topic*, and *media type* of social media posts has on the level and type of engagement with citizens. This was done through content analysis of Facebook social media posts by UK local authorities.

1.7.2 Second Phase

The second phase utilised a questionnaire sent to officials with responsibility for managing their council's Facebook page. Its intent was mainly two-fold: (1) To capture council staff's perspectives on what best engages citizens, in order to compare with Phase I data and see if there was agreement or not; and (2) To capture the thoughts and processes of staff in managing council Facebook pages so as to better understand the whole picture of how they manage Facebook pages and why they make some of the choices they do. The bulk of the questionnaire involved qualitative data, which was examined using thematic analysis.

1.8 Work Plan

The proposal for this project is contained in Appendix A. The work plan followed for the project is available within that Appendix, on page A-9 of the proposal.

1.9 Changes

No major changes to goals or methods occurred during the project. The post attribute of *intent* was renamed from *purported purpose*, which was its original name in the proposal.

1.10 Report Structure

This report is divided into six chapters.

1: Introduction and Objectives explains the premise of the research, introducing some of the literature and making the case for the gap in the research that makes this project worthwhile. It also covers the research question, aim, and objectives. The scope, outputs, and beneficiaries are identified. The work plan is included.

2: Context contains the literature review, setting out the research that this project is grounded in, along with an in-depth analysis of current and past research in e-Government, social media, and other relevant topics.

3: Methods provides a detailed account on how the research was conducted, including how the data was collected and analysed. Rationales for the methods are also discussed.

4: Results explains what was discovered from analysis of the gathered data.

5: Discussion places the results in context of other research conducted in e-Government and social media. It also considers the results in light of the original research questions, aim, and objectives. The implications of the research and resulting recommendations are discussed, including a set of recommendations for local governments in using social media.

6: Evaluation, Reflections, and Conclusions reflects on the project as a whole. It considers the objectives, methods, planning, and literature that were utilised for the project and whether they were appropriate. Learnings of the researcher from the project and changes he would make in the future in light of weaknesses of the research are discussed. The general findings are reiterated, along with suggestions for future work.

Chapter 2: Context

This chapter contains the literature review. It is organised into seven main sections, as follows:

- 2.1: Social Media Introduction
- 2.2: Development of Social Media
- 2.3: e-Government Introduction
- 2.4: Government Adoption of e-Government and Social Media
- 2.5: Encouraging Engagement with Citizens
- 2.6: Barriers to Engagement with Citizens
- 2.7: Summary and Gaps in Research

2.1: Social Media Introduction

The use of social media – which includes sites such as Facebook, Twitter, YouTube, Flickr – has become very common in the last several years, with their adoption rates growing at a fast pace (Al-Deen and Hendricks, 2011). As of January 2014, 74% of online adults in the U.S. used social media sites (Pew Research Center, 2014). Of the top ten most popular sites on the web, four are social media sites (Facebook, YouTube, Wikipedia, and Twitter) – with Facebook and YouTube the second and third most popular sites on the web, respectively (Alexa Internet, 2015).

It is important to start by defining what exactly social media is. Bertot et al. (2012) defines social media as “a set of online tools that are designed for and centered around social interaction.” This definition contains two important components of social media; it involves technology (specifically on the internet) and it involves people (via social interaction). Social media is, then, a socio-technical system (Fuchs, 2014). It is not merely about technology or people, but about the interaction of both.

Fuchs (2014) identifies social media platforms as involving “collective action, communication, communities, connecting/networking, co-operation/collaboration, the creative making of user-generated content, playing, sharing.” The user creation of content that Fuchs mentions is particularly important in defining social media, alongside the ideas of user interaction and participation (Mandiberg, 2012). In fact, there is not much point to the existence of social media sites without this user-created content – that is what they are all about (Mandiberg, 2012).

Social media came about after the transition from Web 1.0 to Web 2.0 in the mid-2000s (Fuchs, 2014). The focus in social media platforms on user-generated content is closely related to Web 2.0’s emphasis on user-generated content. Some argue that it is disingenuous to consider social media as something ‘new’ coming about with Web 2.0, as technologies such as blogs and wikis existed in the 1990s, before Web 2.0. However, even though some of the technology existed it certainly was not in wide-spread use before Web 2.0, and so is still very much tied to the wider Web 2.0 movement (Fuchs, 2014).

Based on this emphasis on a socio-technical system – facilitating user-creation of content with Web 2.0 tools – Kaplan and Haenlein (2010) define social media as “a group of Internet-based applications that build on the ideological and technological foundations of

Web 2.0, and that allow the creation and exchange of user generated content.” There are a number of different types of social media. Kaplan and Haenlein (2010) utilise a framework of social presence/media richness and self-presentation/self-disclosure to categorise the different types – this is reproduced in Figure 2.1.

		Social presence/ Media richness		
		Low	Medium	High
		Blogs	Social networking sites (e.g., Facebook)	Virtual social worlds (e.g., Second Life)
Self- presentation/ Self- disclosure	High			
	Low	Collaborative projects (e.g., Wikipedia)	Content communities (e.g., YouTube)	Virtual game worlds (e.g., World of Warcraft)

Figure 2.1 - Classification of Social Media, reproduced from Kaplan and Haenlein (2010)

Of particular interest to this research are social networking sites. Kaplan and Haenlein (2010) define them as “applications that enable users to connect by creating personal information profiles, inviting friends and colleagues to have access to those profiles, and sending e-mails and instant messages between each other.” Boyd and Ellison (2007) are more specific in their definition, identifying that social networking sites allow users to “(1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.”

These include sites such as Facebook, LinkedIn, and Twitter. They see very widespread use, with around 80% of online users using social networking sites regularly (Chui et al., 2012). Users on social networking sites also tend to use them regularly, as part of their daily routine (Boyd and Ellison, 2007). They allow users to collaborate and interact with other users (Criado et al., 2011). Crucially, as per Boyd and Ellison’s definition, they put an emphasis on the idea of being able to ‘network’ and connect with other users on the site.

2.2: Development of Social Media

Social media is thus very widespread today. The origins of social media can be traced back to the early days of the internet, with Web 1.0 ‘virtual communities’ that developed on list-servers, weblogs, Usenet, and similar services (Armstrong and Hagel III, 1996; Chang and Kannan, 2008; Dijck, 2013). Rheingold (2000) defines these virtual communities as “social aggregations of a critical mass of people on the internet who engage in public discussions, interactions in chat rooms, and information exchanges with sufficient human feeling on matters of common interest to form webs of personal relationships.” These key traits relate both to virtual communities then and the social media that has developed from them.

Web 2.0 represents a shift from users as consumers of information to users as creators of content, becoming both consumers and producers of information – rather than one-way interaction from websites to users Web 2.0 has two-way interaction going in both directions (Chang and Kannan, 2008; Dijck, 2013; O'Reilly, 2007). Of course, as evident

from Armstrong and Hagel III's Web 1.0 virtual communities, there already was some two-way interaction and production of content by users occurring before Web 2.0 came about. However, the key difference is how ubiquitous this two-way interaction became, with the majority of websites adopting it rather than just those that used Usenet, list-servers and similar services.

Another key trait in the development of Web 2.0 was the shift from websites providing a simple utility to providing a custom experience for users; this is when social media websites as known today began to come about (Dijck, 2013). Dijck (2013) identified that these social media platforms as containing "manifestations of social life" – that is to say, common everyday tasks such as talking to a friend or sharing a photo became a part of the social media platform.

This is evident on social media sites such as Facebook today. For instance, consider the birthday of a friend, which involves many social interactions such as wishing them a happy birthday and confirming attendance at their birthday party. Rather than offline methods such as phoning them or posting an RSVP, these tasks can be (and increasingly are) performed within the Facebook platform. Thus, these common social interactions, or "manifestations of social life" as Dijck describes them, become ingrained within the social media platform.

As users increasingly adopted social media, businesses were not far behind. By 2011, some 72% of companies used social networking sites and 90% believed that they had business benefits (Chui et al., 2012). Businesses utilise social media for a number of reasons; for instance, they can engage with customers and gain insights from them faster and by spending less money than other methods (Chui et al., 2012). They also commonly use it to crowd-source ideas, improving their communication and collaboration (Chui et al., 2012).

It's not just for-profit businesses adopting social media, though. It has become very widely adopted in the social-sector for crowdsourcing and as an educational tool to get information out related to the particular organisation's mission (Chui et al., 2012). The low cost involved is likely even more beneficial for social-sector organisations, who often have limited budgets.

Governments have begun to follow business and the social-sector into social media (Criado et al., 2013; Graham and Avery, 2013). Many of the benefits social-sector organisations receive from social media are also relevant for the government, such as running educational information campaigns and facilitating engagement more cheaply than other methods. For example, the Department of Health and Human Services in the U.S. has used YouTube to engage with citizens and crowdsource announcements related to the H1N1 virus public health campaign (Harrison et al., 2011).

Of course, while there are some parallels between business and government adoption of social media, there are also some key differences. For instance, businesses adopt social media to help gain and retain customers, to keep them coming back to purchase goods

and services; the government aims to encourage the public to utilise electronic resources rather than offline ways of connecting with the government (Davison et al., 2005; Freeman and Loo, 2009).

2.3: e-Government Introduction

The adoption of social media by government fits into the wider story of the movement towards electronic government, commonly referred to as e-Government. e-Government aims to utilise technology – the Internet in particular – to deliver government services and administration that once would have been delivered in a more traditional paper-based fashion (Dixon, 2010). Prins's (2001) definition of e-Government focuses on the delivery of government services via the Internet, with emphasis on the technology enabling government services to be delivered in new ways and open up new ways to engage with citizens. Others focus more on how e-Government can effect organisational change in government (Chadwick and May, 2003).

Both of these aspects are important in considering e-Government. New ways of delivering services and engaging with citizens via the Internet is certainly a fundamental part. But the organisational change that e-Government brings has implications for how effective these new ways of delivering services and engaging actually are. The idea of government bureaucracy as understood today has been informed in large part by Weber's Theory of Bureaucracy (Jain, 2004; Weber et al., 1947), a main part of which was emphasis on hierarchy of authority and power. As alluded to in Chadwick and May's focus on e-Government effecting organisational change, e-Government is now challenging that hierarchy.

Jain (2004) found that e-Government has the potential to transform government and bureaucracy. However, there is not a clear consensus on whether e-Government actually does transform government and bureaucracy. Some research has indicated that the bureaucracy and hierarchy of power in government can actually act as a barrier to e-Government success (Jain, 2004; Lee and Kwak, 2012).

To better understand how social media fits into the broader e-Government movement, it's helpful to examine some e-Government maturity models. Moon (2002) and Dixon (2010) argue that the evolution of e-Government can be divided into five broad stages. Figure 2.2 illustrates these five stages, as originally laid out by Moon (2002) and adapted by Dixon (2010).

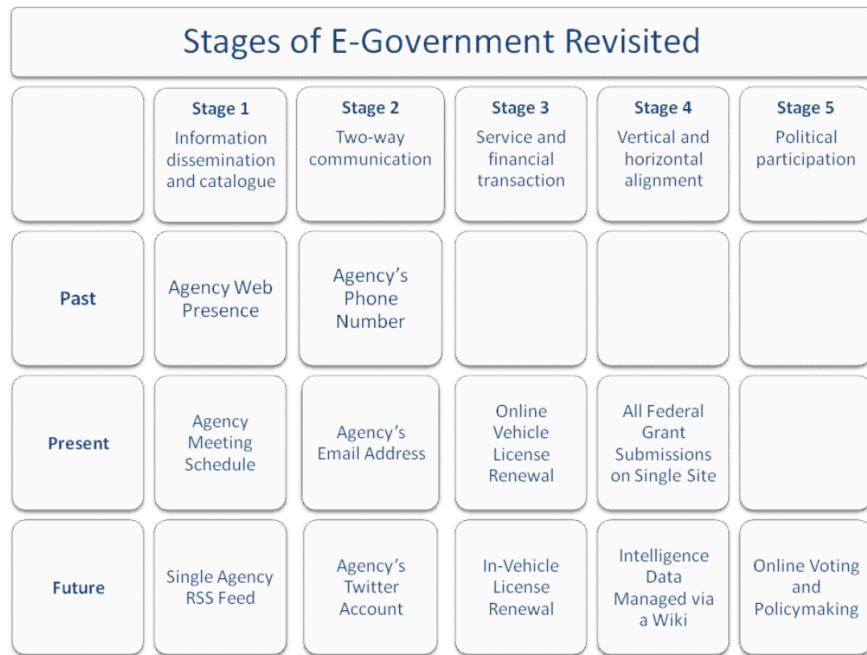


Figure 2.2 - Stages of e-Government, reproduced from Dixon (2010)

The evolution of the stages parallels the evolution from Web 1.0 to Web 2.0. Stage 1 begins by simply reproducing already existing information in an electronic form as an ‘electronic bulletin board’ – very much what Web 1.0 was about. Stage 2 begins to move towards Web 2.0, by involving two-way communication. Stage 3 and Stage 4 then continue this by further utilising Web 2.0 technologies to facilitate back-and-forth interactions with users.

Stage 5 in the evolution of e-Government, then, is where there is a real opportunity to have an enormous impact on how the public engages with government in general (Sinclair and Le, 2007). One of the Web 2.0 tools best served to make an impact here is social media. Linders (2012) discusses how social media can help move e-Government from representing the ‘citizen as customer’ to representing the ‘citizen as partner’. In other words, citizens can begin to have a more participatory and interactive relationship with government – they can become more engaged.

This model emphasises the transition between the Web 1.0 and Web 2.0. Chang and Kannan (2008) instead focus in on e-Government in the era of Web 2.0, creating a three-stage model consisting of ‘communication focused’, ‘interaction focused’, and ‘service focused’ interactions. Each stage moves further up the engagement scale, with ‘service focused’ representing the most engagement.

‘Communication focused’ is the first level, representing governments giving citizens easy access to information in a cost effective and fast manner (Chang and Kannan, 2008). This is similar to Stage 1 in Dixon’s model, in the sense that it is mostly about information distribution one-way, without focus on two-way communication. For example, the European Commission created its own YouTube channel to better promote its message (Chang and Kannan, 2008).

The next level, ‘interaction focused’, brings in more of the two-way communication that is seen in Stage 2 and above of Dixon’s model. It involves government using Web 2.0 to gather feedback from citizens and crowdsource ideas – for instance, the U.S. Patent and Trademark Office allows citizens to review and comment on patent applications (Chang and Kannan, 2008). The final level, ‘service focused’, involves opening up government content for use by intermediaries to “mashup” content (Chang and Kannan, 2008). For example, restaurant health inspection data from government could be combined by an intermediary website with customer reviews to provide greater value than either data set would by itself.

Lee and Kwak (2012) have specifically focused on a maturity model for social media, within the broader set of Web 2.0 tools. It is made up of five levels: (1) Initial conditions, (2) Data transparency, (3) Open participation, (4) Open collaboration, (5) Ubiquitous engagement (Lee and Kwak, 2012). Level 1 (initial conditions) starts with the government focusing on releasing information, with very little or no use of social media (Lee and Kwak, 2012). In that way it is similar to the first stage of Dixon’s and Chang and Kannan’s models.

Level 2 (data transparency) brings greater transparency to government by publishing data considered useful to the public online to be easily accessed (Lee and Kwak, 2012). This still broadly aligns with the first stage of Dixon’s and Chang and Kannan’s models, as there is not two-way communication occurring. Level 3 (open participation) is when government begins to collect public input to use for government decisions, such as citizen’s comments on government Facebook posts. Social media comes into play here as a tool for doing this, along with other Web 2.0 technologies.

Level 4 (open collaboration) increases engagement further, with citizens and governments working to create things together – such as collaboration on creating rules and regulations (Lee and Kwak, 2012). Communication can be seen here between citizens and government and between different government departments. Level 5 (ubiquitous engagement) takes level 3 and 4 further through engagement becoming easier and more universal due to technologies such as mobile internet. This represents the highest level of engagement, and matches the highest levels on the other maturity models. At this stage the act of engaging with government on social media will become a commonplace everyday task.

These various maturity models give a good idea of how social media fits into the broader story of e-Government. They also give a sample of some of the benefits that social media use can bring government, which are explored more in the next section.

2.4: Government Adoption of e-Government and Social Media

In the UK, the first push towards e-Government began after the election of the 1997 Labour government, with the Cabinet Office focusing on a new a way for citizens and the government to work and engage with each other (Chadwick and May, 2003). The origins of this were actually from the previous Conservative government’s 1996 ‘Government Direct’ report, focusing on the e-Government benefits of decreasing costs, more efficient services, and transparency of government (Chadwick and May, 2003).

The focus was very much on transitioning government services to online forms – for instance, allowing driving tests to be booked online or accessing benefits information online (Chadwick and May, 2003; Margetts, 2006). However, notably missing is the lack of focus on citizens participating and engaging with government – it was only about turning paper-based services into electronic ones. Tolbert and Mossberger (2006) describe it as an “entrepreneurial approach” focusing on reinventing government with efficient access to government services online in a similar way to e-commerce sites. The emphasis was on cost savings that could be made by shifting services online. This represents Stage 3 in Dixon’s e-Government model (service and financial transaction).

Over the next couple of years, the government transitioned a great deal of services to electronic forms. However, the UK still lagged behind other countries in getting citizens to actually utilise the services online (Chadwick and May, 2003; Margetts, 2006). Despite this, the government proceeded with its e-Government push by integrating their back-office systems (Weerakkody and Dhillon, 2008), for instance by having the different government departments link up and integrate their systems. The focus here was very much on government-to-government e-Government (Beynon-Davies, 2007). Still missing was any real focus on e-Government’s potential to promote citizen participation and engagement.

One of the first initiatives in the UK that took advantage of this potential for citizen participation and engagement was the e-Petitions system, first created in 2009 by central government and later rolled out to all councils (Ellison and Hardey, 2013). It allowed citizens to submit petitions on issues that were important to them, sharing their opinions with the government and other citizens. There was also an element of collaboration here, as citizens could work together on a petition to raise awareness of an issue and demand government action.

However, it still was not really two-way communication between government and citizen – there is no real dialogue occurring, citizens were just sharing things with government. It is thus only Level 3 (open participation) on Lee and Kwak’s model. Around the same time as the e-Petitions site, social media increased in popularity. Governments in the UK slowly started to adopt social media, including social networking sites such as Facebook. Only then did the e-Government movement in the UK start to shift from the “entrepreneurial approach” to a “participatory approach” emphasising citizen participation and the creation of dialogue.

Bonsón et al. (2014) examined local governments throughout the EU, including the UK. They found that the use of social media tools such as Facebook had become commonplace. Bonsón et al. (2015) also looked at local governments in the EU (including the UK) and examined some of the factors that might impact how well government can engage with citizens on social media. Ellison and Hardey (2013) looked into English local authority’s social media strategies, finding that they were not really making full use of social media to engage with citizens.

Apart from these studies, there is not much in the literature that focuses on how government in the UK is using social media. Although both of the studies by Bonsón et al. were fairly robust, with a measurement scale for how well various governments engaged with citizens, they had limitations in focusing on a number of different EU countries and so being more general than specific – only looking at the five largest local authorities in each country. And while Ellison and Hardey focused on English councils, they lacked a robust empirical method to examine and measure how government was engaging with citizens. There is a need for more robust empirical studies on the use of social media by government in the UK – particularly for studies that have a way to measure engagement levels and look at the different factors that impact engagement.

As has already been illustrated in part, social media use by government has a wide range of benefits. Evidence points to social media use resulting in a more positive view of the government overall (Landsbergen, 2010; Picazo-Vela et al., 2012). This is likely due to the increased transparency, and thus trust, that results from social media use (Chun et al., 2010; Cromer, 2010; Landsbergen, 2010; Lathrop and Ruma, 2010; Picazo-Vela et al., 2012). Citizens who are better able to understand how the government operates (through greater transparency) are not surprisingly more likely to have positive opinions of the government.

Trust and loyalty is also built from government engaging with citizens in their own environments (Chang and Kannan, 2008). Instead of needing to visit government websites to interact, social media allows citizens to interact on platforms such as Facebook and Twitter that they already commonly use. Landsbergen (2010) also found that government interaction via social media cuts costs. For instance, advertising an event on Twitter and allowing citizens to spread the message through retweets is significantly cheaper than printing flyers. This is similar to the rationale used by the UK when first adopting e-Government, and is especially pertinent in the current climate of austerity.

One of the key benefits is increased collaboration, participation, and engagement by citizens with the government (Chang and Kannan, 2008; Chun et al., 2010; Criado et al., 2011; Cromer, 2010; Dijck, 2013; Freeman and Loo, 2009; Mergel, 2012; Picazo-Vela et al., 2012). For instance, citizens can participate and engage by commenting on government Facebook posts, sharing their thoughts on policies; this is commonly referred to as ‘crowdsourcing’, using a crowd of people to generate ideas. There is also potential for collaboration, through citizens commenting on posts and the government responding – enabling two-way communication and collaboration. Some argue that this collaboration and participation represents an increase in democracy, by allowing citizens not usually involved in the political process to take part in policy creation (Chun et al., 2010; Gladwell and Shirky, 2011; Mergel, 2012; Romsdahl, 2005).

However, there is some disagreement on how beneficial social media is for government. Content produced by citizens on social media varies a great deal in quality (Agichtein et al., 2008; Bian et al., 2008). Due to this, some argue that the disintermediation effect from social media reduces the overall quality of content generated by citizens (Bauerlein, 2009; Romsdahl, 2005). However, citizen-produced content was not assured to be of high

quality before social networking sites became predominant. Thus some argue in response that if anything, having more opinions is good as it can allow critical thinking to help weed out the lower quality ones (Chui et al., 2012).

Studies have found that poorer and less-educated users are less likely to be on social media (Chang and Kannan, 2008; Kuzma, 2010; Romsdahl, 2005). This might lead to bias in the opinions found on social media, with opinions from certain segments of the population more represented than others – leading to the government having an incorrect take on public opinion (Freeman and Loo, 2009; Lin et al., 2011; Romsdahl, 2005).

However, other forms of engagement, such as public meetings, generate bias as well because certain segments of the population might be more likely to attend them. So while there may well be bias in social media, it might likely just be a different type of bias than what is usually encountered. Still, some research suggests that the people who tend to engage with government on social media are already politically active offline as well; they doubt the ability of social media to bring in otherwise non-politically active citizens (Effing et al., 2011; Loader and Mercea, 2011; Romsdahl, 2005). This suggests that perhaps social media is just increasing the voice of people who are already politically active; this amplification effect could lead to the government misjudging public opinion.

But some evidence does suggest that although most people engaging are already politically active offline, a significant number using social media to engage with government are *not* politically active otherwise (Christensen and Bengtsson, 2011). This is particularly the case for younger people, who do not interact with government very much offline but are much more likely to engage online. (Brandzæg and Heim, 2009; Christensen and Bengtsson, 2011; Livingstone et al., 2011; Loader, 2007). Therefore, the evidence is not completely clear about how effective social media is in involving citizens who are not traditionally politically active.

Although these benefits have been found at all levels of government, a great deal of the research has focused on the national level. The local government level is particularly interesting to study, for a number of reasons. Cole (2009) suggests that the involvement and engagement of citizens is particularly important for local government, and social media is a way of giving a voice to people others than the ones who typically attend government meetings. Citizens also already commonly engage with local government offline for the delivery of local services; this puts them in a good position to move that engagement online (Ellison and Hardey, 2014).

For a similar reason, local governments often have greater amounts of citizens participating directly than at the national level. At the same time, they operate at a smaller scale. This makes these greater amounts of participants easier and simpler to handle than on a national level (Mossberger et al., 2013). It also allows for more direct participation of citizens than can occur at other levels of government (Peters, 1996).

Graham and Avery (2013) found that the dialogue that is made possible through social media can help local government get past communication barriers they traditionally have

faced. Rather than having to communicate with citizens through reporters and the media, they can directly communicate via social media. Evidence also suggests that this brings increased trust of government at the local level (Tolbert and Mossberger, 2006).

Research has shown that although adoption of social media tools is high among all levels of government, local governments might be less effective users of social media (Ellison and Hardey, 2013). For instance, Kavanaugh et al. (2012) found that local governments don't adequately understand the costs and benefits of social media, or understand how to properly monitor and respond to posts. Due to this, they likely don't understand what impact their posts have on citizens – this makes it important to study what impact things such as topic, intent, and media type have on citizens, and citizen's engagement in particular. All of this makes the local government level a particularly interesting one to study when considering social media.

2.5: Encouraging Engagement with Citizens

As seen, social media use has a number of benefits for government. Out of all the benefits, one of the most key is *engagement*. As defined by Mossberger et al. (2013), “[it] may be conceptualised as higher levels of citizen knowledge, interest, discussion, and participation in government and community affairs.” Looking back at the maturity models, this represents Stage 5 of Dixon’s model (political participation). This is where social media has an opportunity to really transform the way government operates and make an impact, which is what makes engagement so key a benefit.

Although the literature is clear that engagement is an important benefit of social media use, what is less clear is how government can best maximise their engagement with citizens. One consideration is the posts by governments on social networking sites, and how modifying different attributes of the post can vary the level of engagement. For instance, are citizens more willing to engage with posts on certain topics? Does the media type used in the post make a difference in the level of engagement? What about the intent of the post -- does a post that simply provides information provoke the same level of engagement as a post that invites comments from citizens? Also important to consider alongside levels of engagement is if different attributes result in different types of engagement.

2.5.1: Topic

Governments can publish social media posts on a variety of topics – for instance, news on community events, education, social services, and so on. Research has suggested that different topics do result in different levels of engagement; citizens find certain topics more engaging and interesting than others (Bonsón et al., 2015; Graham and Avery, 2013; Hofmann et al., 2013).

Hofmann et al., (2013) found that citizens engaged more with posts on leisure activities. By contrast, Bonsón et al. (2015) found that housing and public transport topics were most engaging. Perhaps this disagreement is down to differences in the coding schemes or coding techniques used by each study. There could also be cultural differences in play between different countries. In any case, it does seem to indicate that governments can't assume a certain topic will always be more engaging; it may very well vary due to a

number of circumstances. More research will be helpful in determining if a consensus can emerge.

Another consideration is what result topic has on type of engagement. For instance, are some topics more likely to result in base-level engagement (such as just 'likes' on Facebook) while others result in dialogue between citizens?

2.5.2: Intent

Governments are using social media in a number of different ways. For instance, they might simply be publishing content already on their web site, pulling information back from citizens via crowdsourcing, or even having a back and forth discussion with citizens (Mergel, 2012). The evidence seems to suggest that the government don't attempt to crowdsource information or establish a back-and-forth dialogue very often – most of consists just of publishing information (Abdelsalam et al., 2013; Hofmann et al., 2013; Ellison and Hardey, 2014; Landsbergen, 2010; Mergel, 2012).

This ties in with Mergel's (2013) e-government social media strategies – the main one being used is the 'representation strategy', where the government simply delivers information without soliciting comments (and may even disable them). There is also the 'engagement strategy', where the government actively invites citizens to comment or crowdsource content, but without a dialogue between the two (rather just one-way communication from citizens to government) (Mergel, 2013). Then the 'networking strategy' consists of the engagement strategy with the addition of a back-and-forth dialogue between citizens and government.

There are also some additional social media strategies that are used, aside from the ones highlighted by Mergel. The government can invite citizens to give feedback on an external site (such as the council website), off the social media platform. This could be for privacy reasons or to make use of tools that can better analyse the results, such as analysis tools commonly available on survey platforms. Governments may also do it as this was the traditional way to capture citizen's opinions online: via comment forms or online surveys (Mossberger et al., 2013).

They can also use social media to invite citizens to give feedback at an offline event, such as a community meeting about budget cuts to libraries. Perhaps they do this because they are weary of inequities in the community as far as internet access (with older and poorer citizens less likely to be active online) or because they are doubtful of the usefulness of social media for feedback.

Something that has not been studied is whether the use of these different social media strategies, or intents, results in different levels or types of engagement. Hand and Ching (2011) suggest that governments might implicitly limit the amount of engagement based on the intent of a post – this is something that needs examined in greater detail. For example, does writing posts using an 'engagement strategy' (where citizens are invited to comment) result in more engagement than a 'representation strategy' (where information is delivered without soliciting comments)? Do posts inviting citizens to give feedback at events offline result in less engagement than asking for comments online with an

'engagement strategy'? Or rather does the intent of the government in writing a post make no difference in the level or type of engagement that results?

2.5.3: Media Type

When writing a post on social media, there are a number of different media types that governments can use. For instance, they can use only text, or they can add a photo, video, link, or some combination thereof. Studies indicate that the use of photos, videos, and other multimedia features may cause citizens to engage more with posts (Bonsón et al., 2015; Hofmann et al., 2013). More research would be useful to confirm that this is the case. Future research can also examine whether certain media types are better suited for specific topics.

2.5.4: Types of Engagement

Citizens can engage with government social media posts in a number of different ways; there is not just one type of engagement (Linders, 2012). For example, citizens might engage only on a base-level, by 'liking' a post on Facebook. Or perhaps citizens provide online feedback on government services (dubbed "citizen sourcing" by Linders), representing one-way communication from citizens to government (Linders, 2012). Citizens can also discuss issues with other citizens, which Linders (2012) refers to as "do it yourself government". There can also be dialogue between the government and citizens, with Linders's (2012) "government as a platform" concept.

Research by Bonsón et al. (2014) suggests that post attributes such as topic and media type might be more likely to result in certain types of engagement. For instance, perhaps specific topics are more likely to cause a dialogue between citizens, while others might be more likely to only see base-level engagement. There has not been any research empirically examining the impact of various post attributes on type of engagement. This would be useful to study, as it can help governments in determining how best to utilise social media to gather feedback on various different topics.

2.6: Barriers to Engagement with Citizens

The success of government in engaging with citizens via social media is debateable. There certainly are some barriers to engagement that governments commonly face, and a number of different ideas as to why that is so. Much of the literature finds that the structure of the government plays a role in limiting its ability to engage with citizens. In particular, research has pointed to the traditional hierarchical structure of government making it difficult to relinquish control of communications (Chang and Kannan, 2008; Chen, 2002; Mergel, 2012).

Governments commonly have a press office which coordinates communication with the general public via carefully worded media releases. A strict hierarchy commonly needs to be followed in order to get a media release out, ensuring there is tight control on any communication. However, if there is tight control on communication via social media it can be very difficult to develop engagement with citizens. It would likely be difficult to publish posts frequently enough for engagement, and difficult to actively reply to citizen's comments on posts. If governments aren't willing to relinquish this strict control of

communication, due to the traditional hierarchical structure of government, the level of engagement might suffer.

This is also connected to the disruptive effect of social media on the traditional bureaucratic hierarchical form of government; a more collaborative structure of government might be better able to encourage engagement using social media (Chang and Kannan, 2008; Chui et al., 2012; Mergel, 2012; Picazo-Vela et al., 2012). A more collaborative structure would also ease controls on communication, which can help ensure that government employees can collaborate to respond to and engage with citizens.

Chang and Kannan (2008) suggest that risk averse officials in government might also create a barrier to engagement. If officials are not willing to take risks by being innovative and trying new ways of communicating, they might not have much success in getting citizens to engage with them. For instance, writing posts in the same style that press releases are written in might not involve much risk, but at the same time might limit engagement. Officials might also be concerned about the privacy of data on social media, and thus be less likely to want to take risks and be innovative in encouraging engagement (Chen, 2002).

Other barriers to government engaging with citizens come down to the way in which many governments utilise social media. For example, research indicates that most government interaction on social media is simply publishing information – using it as an electronic bulletin board, in other words (Abdelsalam et al., 2013; Ellison and Hardey, 2014; Landsbergen, 2010; Mergel, 2012). This does not take full advantage of the opportunities for engagement that social media allows, consisting simply of Mergel's (2013) 'representation strategy'. It is using social media as if it were a Web 1.0 technology, rather than taking advantage of all that social media has to offer as a Web 2.0 tool (Brainard and McNutt, 2010).

This could partly relate to risk averse officials, who don't want to take a chance in innovating with new engagement methods. Perhaps they are concerned about how to deal with negative comments from citizens who are only interested in criticising the government, rather than truly engaging (Landsbergen, 2010; Lathrop and Ruma, 2010; Picazo-Vela et al., 2012). This underutilisation of social media by government could also be due to constraints of time, staff, and funding (Chen, 2002; Graham, 2014; Landsbergen, 2010). A lack of time, staff, and funding might very well mean there is a lack of training and good guidelines on how to use social media for engagement, as well.

One final question to ask is if the government adequately uses the feedback it gets from engaging with citizens on social media, to inform itself. The literature has not looked into this in detail, so more research would be helpful here. But regardless of what the government does with citizen feedback, research shows that by not responding to comments by citizens the government gives off the impression that citizen feedback is not being collected and utilised (Panagiotopoulos et al., 2013). Thus, a fast response by

government seems to be important so that citizens feel their feedback is being taken seriously and they continue to engage (Panagiotopoulos et al., 2013).

2.7: Summary and Gaps in Research

The literature shows that social media, including social networking sites, are very widespread in the world today. Individuals, businesses, the governments, and other organisations all make use of them. Social media sites have emerged from the virtual communities of Web 1.0, which shifted to a wide-spread focus on user-created content alongside the transition to Web 2.0. Businesses found a variety of benefits to social media use, such as being able to cheaply gain insights from customers.

The government then followed businesses into social media, finding that they too could benefit from it. This fits into the wider context of the e-Government movement, as illustrated by a number of e-Government frameworks showing how social media can help to reach higher stages of e-Government maturity. The benefits for government – particularly in encouraging engagement, participation, collaboration, and positive views of the government – demonstrate the potential social media has to transform government, increasing democracy and citizen participation.

There is, however, not consensus on whether social media actually brings in new voices to the political debate, rather than just magnifying the voice of the already politically active. More research is needed in this. There are also still concerns about equity of access to the internet, with the under-representation of certain segments of the population suggesting government should take care in trusting the output from social media. This might be becoming less of an issue as internet access becomes more and more ubiquitous. Up-to-date research should keep close tabs on this.

It is also unclear how useful user-generated content from social media is to government. Is it as useful as feedback they can get from other methods, such as offline consultations and community meetings? More research is needed here. Of particular help would be research that compares the feedback government gets from social media to feedback the government gets in other ways (such as community meetings and offline consultations), checking to see if it is any less or more helpful to government policy makers.

Social media at the local government level is of particular interest to study. The local level already has a great deal of government-to-citizen interaction and it operates at a smaller scale than the national government, making it easier to manage. The evidence does indicate that local governments are less capable in using social media well. There is anecdotal evidence that lack of funding, time, and expertise may be causing this. More research would be useful, to confirm whether this is the case.

The literature is clear that there are benefits to social media use by local governments, particularly in increasing engagement with citizens. More research is needed to find out what local governments can do both to maximise their engagement on social networking sites and to encourage different types of engagement. This includes exploring how the topic of posts effects engagement level and type, as the research here is minimal. More research on the effect of post's media type is also beneficial, to confirm what has already

been found about multimedia content being more engaging. It would also be useful to find out how much more engaging multimedia content is – so that local governments can determine if it is worth spending limited funds on producing videos for Facebook, for instance. There is not any research examining the impact of the intent of a post on engagement with citizens. If there is, knowing what the impact is can help government change the way they write their posts in order to get greater engagement and feedback from citizens.

Much of the research on how local government can best engage using social media has not examined the perspective of the officials in the government managing the social media. For instance, perhaps there is an organisational structure causing certain topics, media types, and intents to be used that aren't best suited for engaging on social media. Maybe there is a mismatch between what government officials believe best engage citizens and what actually does. There could also be political constraints which explain difficulties in engaging, or a whole host of other explanations. There remains a significant gap in the literature here.

Overall, while the literature on the benefits of social media is solid, it is less so as far as how government can maximise those benefits and increase engagement. When considering the local government level, the literature is particularly sparse. Much of it examines what government is doing on social media without a robust framework to measure how well it is engaging, such as Ellison and Hardey (2013) and Hand and Ching (2011). While the lack of robust measurement frameworks is understandable, giving the exploratory nature of the research, it difficult to come to any specific findings on how government can improve its posts. Standardised methodologies and frameworks need to be developed so that future researchers can use them to more easily examine different aspects of social media use by local government. They would also help in facilitating comparisons between different research.

Bonsón et al. (2015) helped improve the robustness of the literature by utilising a framework to score engagement, allowing conclusions to be drawn as to how government can improve their posts. There remains scope for more attributes of posts to be examined, however. The relatively small number of local authorities examined from each country is also a weakness – only considering the largest five cities in a country might give results that are not generalisable. Greater insights – especially of a qualitative nature as to why certain engagement techniques are used – could likely be gained if the perspective of the officials running social media profiles for government were explored. Nevertheless, it is a good foundation on which to base future research on.

The field of social media use by local government is still very young and emerging. There remains a great deal of scope for researchers to explore various perspectives as to how local government is using it and how they can improve.

Chapter 3: Methods

This chapter covers the methods used by this project. It is divided into four main sections, as follows:

- 3.1: Introduction and Overview
- 3.2: Phase I – Content Analysis
- 3.3: Phase II – Questionnaire
- 3.4: Ethical Issue

Sections 3.2 and 3.3 are further subdivided into four sections, as follows:

- Summary
- Rationale
- Data Collection
- Data Analysis

3.1: Introduction and Overview

In order to address the research question, aim, and objectives, the project was split into two phases. The first phase expands upon the study by Bonsón et al. (2015). It utilises content analysis to code Facebook posts by local authorities, resulting in a set of quantitative data. This allows examination of the impact the *intent*, *media type*, and *topic* of social media posts has on engagement with citizens.

The second phase consisted of a questionnaire, directed towards local government officials responsible for managing their council's Facebook page. This had the benefit of collecting data on the impact of social media post characteristics from a different perspective – that of council officials – and thus allowing comparisons with the quantitative data from Phase 1. It also provided some detailed qualitative data, which helped to frame the data from Phase 1 in the proper context. This was particularly helpful when considering the policy implications of the research.

3.2: Phase I – Content Analysis

3.2.1: Summary

Phase I sought to gather quantitative data, in order to address the following three research objectives:

- Discover what impact different *media types* (e.g. photos, videos, links, text) in posts has on engagement level and type
- Discover what impact different *topics* (e.g. housing, transport, education) in posts has on engagement level and type
- Discover what impact the *intent* (e.g. deliver information, request comments, encourage offline engagement) of posts has on engagement level and type

Quantitative content analysis of social media posts by local governments was used to meet these objectives. This expanded upon the study by Bonsón et al. (2015), which also looked at what impact different *media types* and *topics* had on engagement. This study extended that by also considering the impact that the *intent* of social media posts had on

engagement with citizens. It additionally considered what *type of engagement* each social media post encouraged.

A coding scheme was derived to encode each of the attributes of the social media post: *media type*, *topic*, *intent*, and *type of engagement*. Facebook is an ideal platform to use for this analysis, as it has the largest base of UK users of social media – this presents more opportunities for engagement to occur (Ofcom, 2014).

Another benefit of using Facebook is that a framework to measure engagement already exists, as created by Bonsón and Ratkai (2013). Using this framework, an engagement score for each post was calculated, allowing analysis of whether certain *media types*, *topics*, or *intents* resulted in greater engagement than others.

3.2.2: Rationale

Weber (1990, p. 9) describes content analysis as “a research method that uses a set of procedures to make valid inferences from text.” Riff et al. (2013) expands upon this, stressing the importance that it is systematic, replicable, consists of valid measurements, and examines ‘symbols of communication.’ From this, descriptions and inferences can be made.

Content analysis has several advantages that make it a good fit for this research. Firstly, it is possible to analyse content and generate findings without needing access to the people who actually created the content; rather the content itself can be studied (Riff et al., 2013, p.30). This is the case here, as it would be impossible to obtain access to the staff of 36 local authorities and their Facebook fans, to capture data from them directly. In addition, content analysis allows large amounts of data to be transferred into a form which can easily be analysed quantitatively, through coding (Riff et al., 2013). Without content analysis, there would be no viable way to perform in-depth analysis of 1,800 Facebook posts and come to conclusions and recommendations.

There are also some disadvantages to the use of content analysis. Some scholars have argued that it overly simplifies the data into quantitative figures, ignoring the wider context of the situation (Goodwin, 2012, p.419; Riff et al., 2013, p.28). This may be partly true here, as content analysis does not lend itself to explaining *why* certain topics or media types may be more engaging or more commonly used by government. But this is where Phase II comes in as a benefit, capturing qualitative data from the council officials to develop an understanding of Facebook use in local governments and help address some of these ‘whys’. This illustrates how quantitative content analysis can prove particularly powerful and complimentary when paired with qualitative methods (Franzosi, 2008, p. 26).

3.2.3: Data Collection

Data Storage

In order to keep the data from the content analysis well organised and facilitate easy analysis of the various post attributes and their impact on the engagement score, a SQL database was used.

The database also allowed for automatic calculation of the engagement score for any post or subset of posts, through SQL queries. Another benefit was that SQLite enabled exporting this data into a comma-separated value format that was easily imported into SPSS for analysis. An empty database was created in SQLite, containing the tables and relationships as defined by the ER diagram and relational model, available in Appendix B. The database was later checked as part of the pilot, which is described in detail below in *Pilot Test*.

Selection of Local Authorities

In order to conduct the content analysis, Facebook posts by local authorities had to be collected. The first step was to identify which local authorities to include in the study, which began on 22nd June 2015. Bonsón et al. (2015) selected the five largest local authorities in each country to examine. This study adopted a similar nonprobability sampling method. As this study is limited to the UK, the NUTS Level 1 (NUTS-1) regional classifications were utilised (rather than countries) to ensure a balanced representation across the UK (Office for National Statistics, 2012). This represents a form of quota sampling, as local authorities were selected from all regions of the UK – accounting for regional differences and helping to ensure that the sample was more representative of the population than it would have been using other nonprobability methods.

Bonsón et al. (2015) and Graham (2014) found that larger local governments were more innovative with new technology and more likely to make use of Web 2.0 such as social media. Thus, the three largest local authorities in each of the twelve NUTS-1 classifications were selected. Three were selected from each region, rather than five, due to limited time and resources. This gave a total of 36 local authorities. This is typical case sampling, a type of purposive sampling, as it selected the larger local authorities since they tend to use more social media.

The time and resource limits in this study make the nonprobability sampling method chosen appropriate (Daniel, 2012). The use of a purposive sample, rather than a convenience sample, is also a benefit as there is some logic and research evidence behind the reason specific local authorities were chosen. Of course, it is important to be aware of the limitations of this sampling method. Care must be taken when generalising results, as the data will not be as representative as under probability sampling.

The mid-year population estimates by the Office for National Statistics were used to determine the largest local authorities in each region (Office for National Statistics, 2015). A search was then conducted for each local authority to determine if it had a Facebook page that was adequate for the study. This was done by searching Google with the name of the local council followed by the term “facebook”. If that did not locate a Facebook page, the council website was visited (this was located by searching Google with the name of the council) to try to find a link to a Facebook page. If no Facebook page could be found, the next largest local authority was used instead.

Three local authorities in total were excluded for having no Facebook page. There were also several other cases where local authorities were excluded, with the next largest for

the region used instead. One local authority had a Facebook page only as a holding page, directing visitors to visit the council website for more information. One local authority had just recently created their Facebook page, and so did not have enough posts to sample. Two local authorities did not have a single council Facebook page, but had many different pages for different purposes (e.g. events, news, traffic, etc.).

Local authorities that were not excluded due to any of these reasons had their details recorded in the database. This consisted of their name, NUTS-1 UK region, and number of Facebook page fans. The full list of local authorities selected can be found in Appendix C.

Sampling Method for Posts

The next step was to determine how to select a sample of posts from each local authority. Bonsón et al. (2015) used the most recent fifty posts from each local authority – this project did the same. Note that as the coding of posts itself took place over several weeks, the most recent fifty posts from the day coding began were used. In other words, the fifty most recent posts commencing from 2nd July were used for all local authorities.

Content Analysis Coding Schemes

The coding schemes then had to be created for the attributes of each post: *media type*, *topic*, *intent*, and *type of engagement*.

Media type refers to what sort of media content a post contains. For example, is it just text, or is there an attached photo?? Bonsón et al. (2015) developed a coding scheme for *media type* that categorises a post as using a: *video*, *link*, *photo*, *text*, or *other*. This was utilised for this project, with a few modifications. These modifications occurred as a result of the pilot test, which revealed uncertainty in how to code a post containing both a *photo* and a *link*, or both a *video* and a *link*. The coding scheme is illustrated below in Figure 3.1. Using this similar scheme has the advantage of the scheme's validity being confirmed through use in a previous study. It also allows for comparisons with that study (and others using the scheme or a similar one) to be easily made.

ID	MEDIA TYPE	DESCRIPTION
1	Video	Post contains an attached video. No link is included in the post.
2	Link	Post contains a link to an external web page or another Facebook page.
3	Photo	Post contains an attached photo. No link is included in the post.
4	Text	Post contains only text and no other media type.
5	Link with photo	Post contains an attached photo and a link to an external web page or another Facebook page (combination of ID=2 AND ID=3).
6	Link with video	Post contains an attached video and a link to an external web page or another Facebook page (combination of ID=2 AND ID=1).

Figure 3.1 - Media Type Coding Scheme

Topic is concerned with what subject a post is related to, such as housing or education. Bonsón et al. (2015) also developed a coding scheme for *topic*. This research adopted this

same scheme. This brings the advantage of facilitating easy comparison between the studies. It also has the benefit of having its validity and comprehensiveness confirmed through use in a previous study. The complete coding scheme for *topic* is illustrated in Figure 3.2.

ID	TOPIC	DESCRIPTION (NOT INCLUSIVE)
1	Public works and town planning	Current or future planning matters, infrastructure work (including traffic/road work), new buildings, construction work, etc.
2	Environment	Environmental matters, recycling, how to be more “green”, etc.
3	Attention to the citizen	Information on individual/groups of citizens, recognition of citizens achievements/awards, etc.
4	Citizen participation	How citizens can take part in events, programmes, other community schemes, etc.
5	Social services	Social care, adoption services, fostering, childcare, etc.
6	Citizen protection and security	Police, fire safety, crime, fraud warnings, etc.
7	Public transport	Buses, trams, trains, and other public transit (including issues such as fares and routes related to them), etc.
8	Employment and training schemes	Training programmes, apprenticeships, job vacancies, etc.
9	Health	Healthcare issues, eating healthy, staying in shape, etc.
10	Education	Schools, colleges, universities, and other educational programmes, etc.
11	Cultural activities and sport	Events occurring in the community including festivals, concerts, sports matches, fayres, etc.
12	Housing	Council housing, house building, housing policies, etc.
13	Governance issues	Council meetings, council administrative notices, election information, etc.
14	Financial reporting	Budget information, spending plans, etc.
15	Marketing/city promotion/tourism	Promoting tourist activities, activities to do in the community, awards won by the community, etc.
16	Other	Anything not fitting in one of the above categories.

Figure 3.2 - Topic Coding Scheme

The *intent* of a post refers to what the goal of the council is in publishing the post. – for instance, are they simply publishing information or are they requesting feedback from citizens? Mergel (2012) discusses several goals governments might have when using social media – or *intents* – such as to publish information, pull information from citizens via

crowdsourcing, or engage in a back-and-forth conversation with citizens. Hand and Ching (2011) discussed whether governments implicitly limit the level of engagement based on the *intent* of a post. In other words, does a post that simply provides information provoke the same level of engagement as a post that invites comments or a post that invites citizens to provide their feedback in another manner offline? The coding scheme for *intent* was created based on this research by Mergel and Hand and Ching, and is displayed below in Figure 3.3.

ID	INTENT	DESCRIPTION
1	Deliver information	Using post as an electronic bulletin board to disseminate information.
2	Requesting feedback	Actively eliciting comments on the post.
3	Offline engagement activity	Promoting an activity occurring offline that involves engagement with government (e.g. a community meeting about the future of the libraries).
4	Government website engagement activity	Promoting an activity which involves engagement with government off the social media platform and on the local government website (e.g. a feedback survey hosted on a council site).
5	External website engagement activity	Promoting an activity which involves engagement with government off the social media platform and on an external website (e.g. a feedback survey hosted on a survey company site).
6	Engagement on another social media platform	Encouraging users to engage on a different social media platform from the current one (e.g. directing users to comment on a topic using a Twitter hashtag).

Figure 3.3 - Intent Coding Scheme

The above three attributes were assigned to each post by examining the content of the post (including any photos, videos, and text included in the post). In contrast, *type of engagement* was determined by examining the responses left by users to the post; in other words, by looking at the likes, comments, and shares left on the post. Linders (2012) postulated that there are different ways in which engagement can occur. For instance, citizens leaving online feedback on government services represents citizen-to-government engagement, and government crowd-sourcing resolutions to problems from citizens consists of both government-to-citizen and citizen-to-citizen engagement (Linders, 2012). The notable observation here is that there is not simply one form of engagement with citizens, but a number of different ones. Further, research by Bonsón et al. (2014) indicated that different attributes of posts might encourage different of these types of engagement by citizens. For instance, some topics might encourage a dialogue between citizens in the comments, while other topics might bring more of a one-way engagement with likes and shares but no dialogue. Figure 3.4 contains the coding scheme utilised for *engagement type*.

ID	ENGAGEMENT TYPE	DEFINITION
1	Base-level	Only <i>likes</i> , <i>shares</i> , or <i>comments</i> that contain only a tagged user and no substantive content.
2	One-way	Citizen leaves a comment, but with no reply from other users or the government.
3	Citizen-to-government dialogue	Citizen leaves a comment, which is responded to by the government.
4	Citizen-to-citizen dialogue	Citizen leaves a comment, which is responded to by other citizens.
5	Citizen-to-government dialogue AND Citizen-to-citizen dialogue	ID=3 AND ID=4 in the same post.

Figure 3.4 - Engagement Type Coding Scheme

Following the finalisation of the coding schemes, their definitions were then inserted into the database.

Engagement Score

Engagement scores were calculated for posts using the framework for Facebook established by Bonsón and Ratkai (2013) and reproduced in Figure 3.5. Engagement is calculated by adding together P_3 , C_3 , and V_3 from Figure 3.5.

Name	Sign	Formula	Measures
Popularity	P1	Number of posts with likes/total posts	Percentage of the total posts that have been liked
	P2	Total likes/total number of posts	Average number of likes per post
	P3	(P2/number of fans)*1,000	Popularity of messages among fans
Commitment	C1	Number of posts with comments/total posts	Percentage of the total posts that have been commented on
	C2	Total comments/total posts	Average number of comments per post
	C3	(C2/number of fans)*1,000	Commitment of fans
Virality	V1	Number of posts with shares/total posts	Percentage of the total posts that have been shared
	V2	Total shares/total posts	Average number of shares per post
	V3	(V2/number of fans)*1,000	Virality of messages among fans

Figure 3.5 - Engagement Calculation, reproduced from Bonsón and Ratkai (2013)

This required the number of *likes*, *shares*, and *comments* to be stored in the database for each post. Note that when considering the number of comments, replies to comments were counted as additional comments. This framework is useful to utilise as it has been verified through use in previous studies. It also ensures that scores are adjusted for the number of Facebook fans each page has, which is vital in producing meaningful scores and results.

Pilot Test

A pilot test was then conducted by coding the most recent fifty posts for a randomly selected local authority (which was not otherwise involved with the study). The pilot test sought to confirm that:

- The database design was sound and resulted in valid data.
- The engagement score could be calculated for individual or subsets of posts using SQL queries.

- The data could be successfully extracted from the database and imported into analysis software.
- The content analysis schemes were clear and did not need any modifications.

To start, the test local authority had its name, UK region name, and number of fans inserted into the database. The most recent post was analysed, recording the local authority and timestamp (to uniquely identify it and allow revisiting it later if needed). The number of likes, comments, and shares was then recorded. The post was read and analysed to determine its *media type*, *topic*, and *intent* as per the coding schemes. The comments, likes, and shares were assessed to assign an *engagement type*. This process was then repeated for the other 49 most recent posts for the local authority. Through this process, it became apparent that the original coding scheme for *media type* was not robust enough, so it was changed, as discussed above.

SQL queries were created to check if the data could successfully be extracted from the database – including if the engagement score could correctly be calculated. The results were then analysed and crosschecked by hand, to ensure that they were valid. No issues were identified, so the pilot data was destroyed and the project proceeded.

Post Coding

The coding of posts for the first local authority began on 2nd July 2015. It followed the same steps outlined above in the *Pilot Test* for each post, utilising the coding schemes introduced above and documented in the codebook contained in Appendix D. The coding process was complete by 27th July.

3.2.4: Data Analysis

The data was exported from the database using a SQL query (available in Appendix B) and imported into SPSS (with some minor adjustments to allow accurate analysis of multi-coded posts). A Kruskal-Wallis test determined if *media type*, *topic*, or *intent* influences the level of engagement. This is the appropriate test to use when comparing three or more groups to see if they differ on a specific variable – the interval measure of *engagement score*, in this case (Chan and Walmsley, 1997).

If the Kruskal-Wallis tests showed there were differences in engagement due to the post attribute, further post hoc tests were performed. These pinpointed which *media types*, *topics*, or *intents* were more engaging than others.

Next, tests were performed to find if certain *media types*, *topics*, and *intents* were more likely to result in specific *types of engagement*. Pearson's chi-squared test was appropriate for this, to ensure that differences between the groups did not arise simply by chance (Oates, 2005). Assuming this test showed that the differences were significant and not simply from chance, the data was further analysed to find out which *types of engagement* were more common for specific *media types*, *topics*, and *intents*.

Aside from these statistical tests, some more basic quantitative figures were compiled to provide greater context. These included finding out which *media types*, *topics*, and *intents*

councils used most often – allowing analysis of whether councils tended to author posts using *media types*, *topics*, and *intents* that were more or less likely to engage citizens.

3.3: Phase II – Questionnaire

3.3.1: Summary

Phase II gathered qualitative data in the form of questionnaire responses from officials responsible for managing Facebook pages in local governments. The aim here was two-fold. First, it aimed to see what council officials believe best engages citizens, so that this could be compared with data from Phase I and see if there was agreement or not between council's opinions and the data. Secondly, it aimed to capture qualitative data so as to better understand the whole process of how councils manage Facebook pages, and why they make some of the decisions they do. This also helped to give greater insight and background into the data from Phase I, allowing relevant recommendation to be made to councils. As such, Phase II mainly focuses on addressing the following two objectives:

- Explore how government officials managing social media attempt to encourage engagement with citizens and how well they feel they are doing so
- Develop best practice recommendations for local government in encouraging engagement with citizens

For the questionnaire data comparing official's opinions with Phase I data, simple quantitative analysis was performed (e.g. to see what topics officials thought citizens found most engaging). The bulk of the questions, however, were analysed using thematic analysis. This involved consolidating the multitude of opinions and thoughts received in the responses into a number of clear themes (Aronson, 1995).

3.3.2: Rationale

The choice of a questionnaire fits well with the research objectives that Phase II addressed. The collection of qualitative data via the questionnaire to gain better understand of how councils use Facebook pairs particularly well with the quantitative data from Phase I (Franzosi, 2008, p.26). They compliment each other well, and are particularly useful in helping to form policy recommendations, as this research goes on to do.

Questionnaires are well suited when a large sample size of data is needed, and thus interviews aren't practical due to time, financial, or other constraints (Oates, 2005, p.220). They also produce standardised data from all participants due to everyone answering the same questions (Oates, 2005, p.220). The use of structured questions via the questionnaire means that this standardised data can more easily be generalised to the larger population (Peterson, 2000, p.8). Officials from 165 local authorities in total from across the UK were invited to take part in the questionnaire. It would not have been possible to arrange to interview a sample size that large, especially considering it would involve a significant amount of travel across the country.

Despite these advantages, it is important to recognise the limitations of questionnaires. Unlike interviews, it is not possible to ask follow-up questions based on the participant's responses. This could have led to new lines of enquiry and findings that the questions in

the questionnaire alone did not discover. The richness of data from the open-ended questions can also suffer in comparison to interviews, as participants do not always write very detailed answers. However, this must be balanced against the benefit of the questionnaire in allowing more points of view to be represented from the greater number of participants than an interview could hope to. In the end, it is important to have data from a large number of participants to ensure that the findings can be generalised to the larger population, and do not just relate to the opinions of officials in a few local authorities.

The importance of a well-designed questionnaire to ensure valid and reliable responses is well known (Oates, 2005, pp.220-227; Peterson, 2000, pp.16-17). To ensure that the questionnaire is well-designed a robust process must be followed in creating it, with sufficient grounding in literature and best practices; thus this research adopted a detailed questionnaire design framework. By following this, the validity and reliability of the questionnaire results can be affirmed and the conclusions drawn from them trusted.

3.3.3: Data Gathering

Sampling Method for Local Authorities

Phase II began on 22nd June 2015, by selecting the local authorities to invite to participate. This was done in a similar fashion to how they were selected in Phase I. Councils were chosen from every region in the UK to ensure a representative sample, using the NUTS-1 classifications (Office for National Statistics, 2012).

Just as Phase I targeted larger local authorities, so did Phase II for the same reasons. However, in order to ensure a sufficient amount of responses would be received, many more local authorities were selected for this phase than the first – 165 in total.

Thus, this study adopted typical case sampling, a type of purposive sampling, as it selected the larger local authorities since they tend to have greater use of social media. It also adopted a form of quota sampling, as councils were selected from all regions of the UK. The focus of Phase II on in-depth exploration of the how councils manage Facebook pages, through qualitative data, make these nonprobability sampling techniques appropriate as well (Daniel, 2012). Of course, it is important to be aware of the limitations of this sampling method. Care must be taken when generalising results, as the samples will not be as representative as they are when using probability sampling. However, care would need to be taken even if probability sampling was used, because there is no guarantee that the smaller subset of invited councils who agree to participate would be representative.

The top fifteen local authorities that had active Facebook pages in each region were selected. To check if a council had an active Facebook page, Google was searched with the name of the local council followed by the term “facebook”. If that did not locate a Facebook page, the council website was visited (this was located by searching Google with the name of the council) to try to find a link to a Facebook page. The Facebook page was not deemed to be active if there were no posts within the last month on the page – in this case the next largest local authority was used instead. The next largest local authority was also used if no Facebook page could be located.

Although this study sought to select fifteen councils from each NUTS-1 region, this was not possible for four of the regions, as they did not have enough local authorities with active Facebook pages. Northern Ireland only had eight councils to invite, Yorkshire and the Humber had 12, North East England had 11, and South West England had 14. A full list of the local authorities invited to take part in the questionnaire is available in Appendix E.

Participant Recruitment

The next step was to locate contact information for each local authority selected for the questionnaire, which was begun on 23rd June. This was done by visiting the council's website, located by searching Google with the council name. A "Contact Us" or similar worded option was then selected. In some cases, this provided an email address to send enquiries to. Other councils did not list an email, but had an online forum that could be filled in for enquiries. A few councils did not have an email or a forum providing any obvious way to contact them with enquiries – in these cases, a Facebook message was used to contact them.

A message was then sent via one of the three methods mentioned above, inviting the person responsible for managing the council's Facebook page to participate in the questionnaire. The full text of the message used can be located in Appendix F. If they indicated interest in participating, this was noted so that they could be sent the questionnaire when it was ready. In total, 47 councils indicated interest in participating.

Questionnaire Design

As discussed by Peterson (2000), asking the right questions in the right way is vital to gaining useful data in a questionnaire. Research has shown that the question wording, form (e.g. yes/no versus Likert scales), order, and many other characteristics can vary the responses received (Ornstein, 1998). Thus it is important to take all these things into account when constructing a questionnaire. As such, this project adopted Peterson's (2000) framework of *Steps in Constructing a Questionnaire*, which is reproduced below in Figure 3.6.

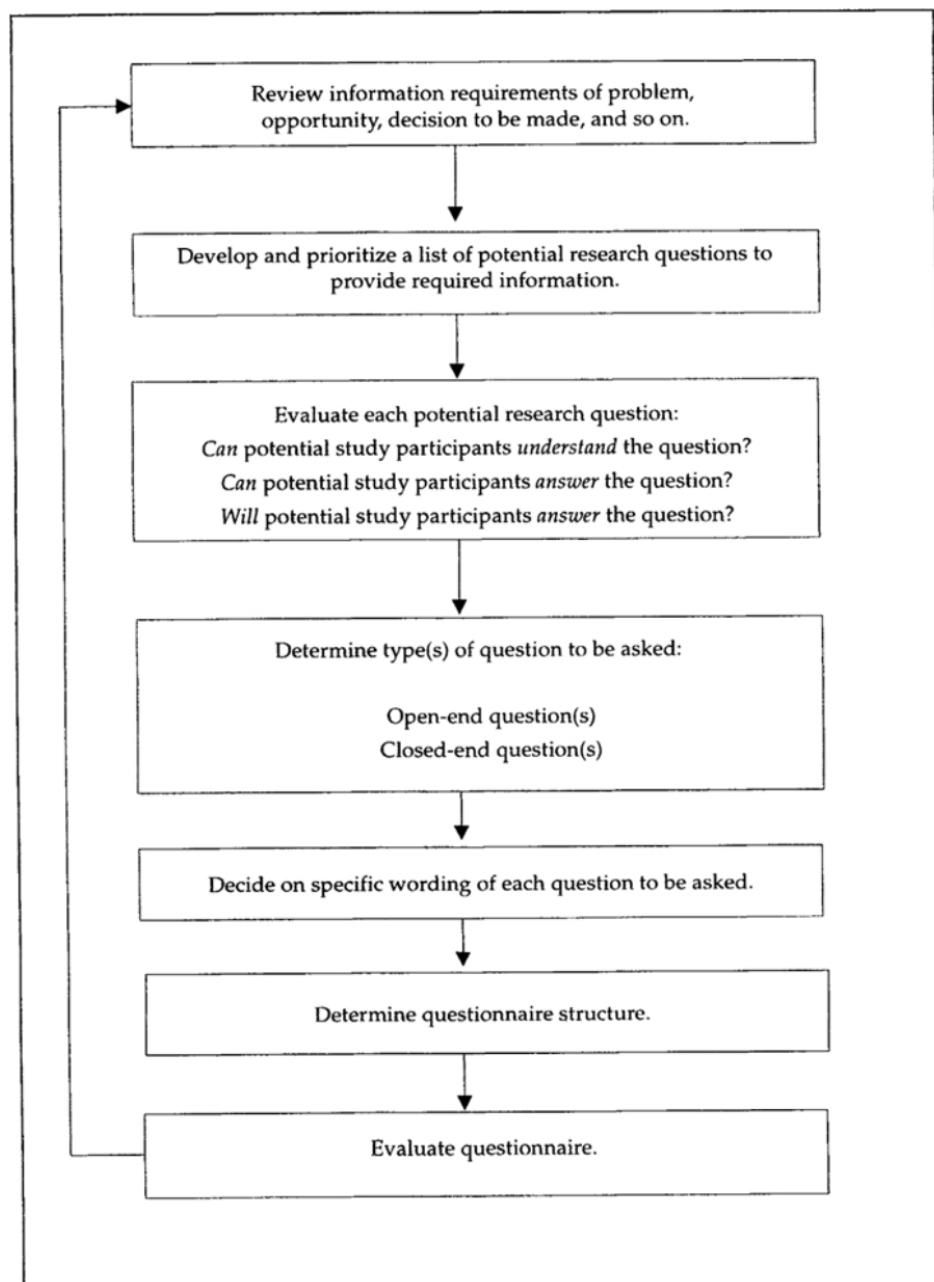


Figure 3.6 - Steps in Constructing a Questionnaire, reproduced from Peterson (2000)

The questionnaire requirements were identified, keeping in mind the research objectives for Phase II and the two main aims of the questionnaire:

- Find council official's opinions on what best engages citizens and compare with results from Phase I
- Capture qualitative data so as to better understand the whole process of how councils manage Facebook pages and why they make the decisions they do

With these objectives and the two questionnaire aims in mind, a prioritised list of potential research questions was drafted. Each potential question than then evaluated to ensure respondents could understand, could answer, and would answer them. As the respondents work with Facebook in local government, they could understand and answer

them. The majority of the questions were not too time-consuming or sensitive, so officials most likely would answer them. The only concern was if officials would give enough detail in the open-ended questions, but this risk had to be taken as interviews were not a viable alternative.

As far as question type, this research utilised both open-ended and close-ended questions. The questions comparing official's opinions with Phase I data were suited to close-ended questions, as they could utilise the coding schemes from Phase I as answers. The questions relating to how councils used Facebook were mostly open-ended. Ornstein (1998) talks of how open-ended questions are well-suited when the range of potential answers is not already known – such as here where there were no predetermined possible answers that could have been used to construct a close-ended questions. Even if there were, this would not be preferable or valid, as it would be artificially limiting the participant's answer.

Next, the specific wording of the questions had to be determined. This is a key step, as research has shown that even slight variations in the wording of questions can lead to drastic differences in results (Peterson, 2000). Peterson (2000) proposes the "BRUSO" criteria – that questions are "*brief, relevant, unambiguous, specific, and objective.*" This research endeavoured to follow these suggestions, especially avoiding long and complex sentences, redundant questions, ambiguous questions, the words "always" or "never", and leading questions that could impact not only the answer to them but to following questions (Loftus, 1975).

The next step was to determine the structure of the questionnaire. Topics were arranged in logical order, to make it easier on participants. More difficult and potentially sensitive questions were placed near the end, so as to not dissuade participants at the start. (Oates, 2005). These included potentially politically controversial questions such as how citizen's feedback is shared within the council.

The final stage in creating the questionnaire was to evaluate it. As this was to be an online questionnaire, this was not done until after the online questionnaire was designed and ready to launch. Please refer to the *Pre-test* section below for a full account on the evaluation method used.

Questionnaire Creation & Layout

In order to make it easier both to administer and for participants to respond, the questionnaire was hosted on the web using Google Forms. This allowed customisation of the form and easy export of the data into a spreadsheet. Web questionnaires also allow the use of pages, so participants do not have to see all questions at once.

Manfreda et al. (2002) suggest that only showing a limited number of questions per page can provide limited context and interrupt the participant's concentration. To ensure this didn't occur, questions were grouped into logical topic areas, which were all contained on one page. Google Forms also allowed funnel questions, which helped ensure that follow-up questions are only asked to participants that they are relevant to (Peterson, 2000).

In general, close-ended questions utilised tick boxes (when users could select multiple answers) or radio buttons (when users could only select one answer). As per ethical practices, users could also select that they prefer not to respond – or simply skip the question altogether. Open-ended questions provided text boxes for users to type their answers in.

Another advantage of Google Forms was its anonymity, with no identifying information about each participant being captured, only a submission timestamp. This had the potential of making participant's feel more comfortable in providing candid responses, especially for the open-ended questions.

After design of the questionnaire on Google Forms was complete, evaluation via a pre-test was able to proceed.

Pre-test

As per Peterson's (2000) framework, evaluating a questionnaire is the final step. This is a particularly vital stage, as it helps to identify any ways the questionnaire may not be understood by participants as intended or provide the information that the researcher hoped to capture. This research utilised the pre-test method of evaluating the questionnaire, as described by Peterson (2000).

As it was not possible to pre-test with participants from the intended audience of local government officials, it was conducted with a group of users familiar with Facebook. Each tester was asked to share their understanding of the questions, to check if they were capturing what they intended to. No issues were identified through the pre-testing, with all testers sufficiently understanding the questions.

Questionnaire Publication

After the pre-test was complete and all final adjustments were made, the questionnaire was published online (a full copy is available in Appendix G). Each official who indicated interest in participating was sent an email containing a link to the questionnaire (refer to Appendix F for a copy of the email). The questionnaire was released on 3rd August and ran to 2nd September.

3.3.4: Data Analysis

The questions asking official's opinions of what was most engaging and the best way to seek feedback were analysed using simple quantitative measures. The most popular categories selected by officials were compared with what categories actually *did* cause the highest engagement, according to the data from Phase I. This helped to discover whether or not there was a disconnect between official's opinions and what actually engaged citizens the most.

The second set of questions – which dealt with how councils use Facebook – were examined using thematic analysis. Braun and Clarke (2006) describe thematic analysis as "a method for identifying, analysing and reporting patterns (themes) within data." This makes it a useful analysis method to explore this questionnaire data, as it allows for a good understanding of how Facebook is used in local government to be developed

through the discovery of various themes in the questionnaire data. Thematic analysis also has a number of other advantages that make it well-suited for this research, such as its flexibility, ability to summarise a rich set of qualitative data, ability to bring about unanticipated insights, and its usefulness in helping to develop policy (Braun and Clarke, 2006).

Braun and Clarke (2006) have developed a framework for thematic analysis, which was adopted for this research and is reproduced below in Figure 3.7.

Phase	Description of the process
1. Familiarizing yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Figure 3.7 - Thematic Analysis Framework, reproduced from Braun and Clarke (2006)

This consisted of first reading through the responses and then creating codes on interesting aspects of the data. These codes were examined in greater detail and grouped together into various themes and subthemes. The themes were then reviewed by comparing them back to the responses and ensuring no themes had been missed. Finally, the themes were defined, named, and written up in the report – relating the themes back to the research questions. This is what enables complete and meaningful findings to emerge from the thematic analysis, allowing the research objectives to be met.

3.4: Ethical Issues

As part of the proposal phase of this project, ethical approval was sought and received for this research. In the first phase of this project, analysis of posts authored by local authorities on their public Facebook pages was conducted. As part of this, the number of 'likes' and 'shares' were recorded, along with the coded values of the 'topic', 'media type', 'intent', and 'engagement type'. However, no personal data was used or stored at any time – only the coded values for each post. As such, there were no ethical concerns in Phase I.

The second phase of the project involved a questionnaire, which was completed by officials in local government who are responsible for managing their council's Facebook page. All participants in the questionnaire received a detailed information sheet that they read before taking part (available in Appendix H). Informed consent was received from each participant before taking part, via an electronic consent form included at the start of the questionnaire that respondents had to fill in to proceed (available in Appendix G). The questionnaire did not seek to collect any identifying information – any such data inadvertently recorded was scrubbed from the data. As such, questionnaire responses contained in this report are anonymous and no individuals or local authorities have been individually identified.

Chapter 4: Results

This chapter contains the results of the research, following the methods as laid out in the previous chapter. The chapter is organised as follows:

- 4.1: Phase I – Content Analysis
 - 4.1.1: Media Type
 - 4.1.2: Topic
 - 4.1.3: Intent
 - 4.1.4: Phase I Summary
- 4.2: Phase II – Questionnaire
 - 4.2.1: Official’s Opinions on Engagement of Specific Topics and Media Types
 - 4.2.2: How Officials Seek Feedback from Citizens
 - 4.2.3: What Officials Do with Feedback
 - 4.2.4: How Officials Decide What to Post About
 - 4.2.5: Difficulties in Engaging
 - 4.2.6: Phase II Summary

4.1: Phase I – Content Analysis

This section presents the results from the analysis of Facebook posts by local authorities, examining the impact of media type, topic, and intent on level and type of engagement. In total 1,800 posts were analysed, from 36 local authorities across the 12 regions of the UK.

The full Phase I data is available in electronic format – see Appendix J.

4.1.1: Media Type

Level of Engagement

Figure 4.1 presents the frequency that different media types were used by councils in their Facebook posts. As seen, *link with photo* is the most popular choice, followed by *link*.

Media Type	Frequency	Percent	Cumulative Percent
Link with photo	923	51.3	51.3
Link	376	20.9	72.2
Photo	278	15.4	87.6
Text	135	7.5	95.1
Link with video	61	3.4	98.5
Video	27	1.5	100.0
Total	1800	100.0	

Figure 4.1 - Media Type Frequency

A Kruskal-Wallis H test was performed, to determine if different media types caused a significant difference in engagement level. The test indicated that there is a significant difference, $H (5, N = 1800) = 156.522, p < 0.001$. Thus different media types do result in different engagement levels.

Follow-up tests were performed using the Dunn-Bonferroni method with $p < 0.05$, to determine where there were significant differences between media types. The full details of the post hoc tests are located in Appendix I. The median engagement score for each media type is also displayed below, in Figure 4.2.

	Media Type	Median
Engagement score	Link with photo	1.13314
	Link with video	.60223
	Link	.37467
	Photo	2.48455
	Text	.53735
	Video	2.36162

Figure 4.2 - Media Type Median Engagement Scores

The results indicate that *photos* and *videos* are significantly more engaging than *text*, *links*, and *links with video*. In addition, *photos* are more engaging than *links with photo*. Although the medians seem to indicate that *links* are the least engaging, even less so than *text*, the post hoc tests illustrate that there is not sufficient data to conclude that. However, the data does show that *links*, *text*, and *links with video* are the least engaging media types.

Type of Engagement

A chi-square test was performed on the cross-tabulation of media type and engagement type. The results indicated that a relationship exists between media type and engagement type, $\chi^2(25, N = 1800) = 161.081, p < 0.001$.

		Engagement Type ^a					Total
		Base-level	One-way	Citizen-to-citizen dialogue	Citizen-to-government dialogue	No engagement	
				% within Media Type	% within Media Type	% within Media Type	
Media Type	Link with photo	59.2%	10.6%	13.1%	7.9%	12.6%	923
	Link with video	68.9%	8.2%	4.9%	0.0%	18.0%	61
	Link	54.5%	9.6%	8.5%	3.5%	26.1%	376
	Photo	53.2%	16.2%	17.6%	8.3%	10.1%	278
	Text	32.6%	14.1%	19.3%	9.6%	31.9%	135
	Video	40.7%	18.5%	29.6%	3.7%	11.1%	27
	All Media Types	55.3%	11.6%	13.3%	6.8%	16.6%	1800

Percentages and totals are based on respondents.

a. Group

*Note: Rounding results in some media types adding up to over 100%

Figure 4.3 - Percent of Engagement Type by Media Type

The cross-tabulation of media type and engagement type is displayed in Figure 4.3, illustrating the percent of each engagement types that occurred for each media type. Base-level engagement was the most common for every media type, with only *text* and *video* with below 50%. *Text* posts base-level engagement nearly tied with its no engagement rate, with less than 1% a difference. *Text* posts were also most likely to receive no

engagement, followed by *links* and then *links with video*. The other media types – *link with photo*, *photo*, and *video* were all nearly tied, with about 10% to 12% of those posts receiving no engagement.

In one-way engagement, there is not much of a clear difference between media types – they all range between 8% to 16%. Looking at citizen-to-citizen dialogue, this occurred most commonly for *video* posts. *Text* and *photo* posts are tied for second place. For citizen-to-government dialogue, there is once again no clear difference between the media types – they are all under 10%, with not much range between them.

Some caution should be exercised when examining the data for conclusions, due to limitations in the sample size. For instance, by far the majority of posts (over 50%) consist of the *link with photo* media type. Thus, there are only small samples of *link*, *photo*, *text*, and *video* posts for the dialogue engagement types.

Combining some of the engagement type categories together can help counteract this weakness and provide greater insight by providing a larger combined sample size. To this end, a category was created by adding the citizen-to-citizen dialogue and citizen-to-government dialogue engagement types together, allowing analysis of which topics encouraged dialogue (regardless of its type). Another category was created by adding the two dialogue engagement types with the one-way engagement type, facilitating analysis of which topics encouraged any sort of non-base-level engagement. The results of this are contained below in Figure 4.4.

Media Type	Engagement Type				% within topic
	Citizen-to-citizen dialogue OR Citizen-to-government dialogue	Citizen-to-citizen dialogue OR Citizen-to-government dialogue OR One-way	Base-level	No engagement	
	% within topic	% within topic	% within topic	% within topic	
Link with photo	21.0%	31.6%	59.2%	12.6%	
Link with video	4.9%	13.1%	68.9%	18.0%	
Link	12.0%	21.6%	54.5%	26.1%	
Photo	25.9%	42.1%	53.2%	10.1%	
Text	28.9%	43.0%	32.6%	31.9%	
Video	33.3%	51.8%	40.7%	11.1%	
All Media Types	20.1%	31.7%	55.3%	16.6%	

*Note: Rounding results in some media types adding up to over 100%

Figure 4.4 - Percent of Engagement Type by Media Type (with combined categories)

Looking at the ‘citizen-to-citizen or citizen-to-government dialogue’ category, *video* posts come top in eliciting dialogue, closely followed by *text* and *photo* posts. This is still the case when one-way engagement is added into the dialogue category, except that *video* posts become even more convincingly on top, with around 50% of *video* posts eliciting

some sort of non-base-level engagement. *Text* and *photo* posts remain tied for second place.

Conversely, *link with video* and *link* posts are the least common in both the dialogue category and in the combined dialogue and one-way category. This is evident when looking at their combined base-level and no engagement rates. Nearly 87% of *link with video* and 80% of *link* posts receive base-level or no engagement – nearly four out of every five posts.

4.1.2: Topic

Level of Engagement

Figure 4.5 presents the frequency that different topics were used by councils in their Facebook posts. *Cultural activities and sport* is by far the most popular topic for councils to post on. Taken together, the top four topics – *cultural activities and sport*, *public works and town planning*, *social services*, and *marketing/city promotion/tourism* – account for over 50% of all posts.

Topic	Frequency	Percent	Cumulative Percent
Cultural activities and sport	498	27.7	27.7
Public works and town planning	169	9.4	37.1
Social services	165	9.2	46.2
Marketing/city promotion/tourism	161	8.9	55.2
Governance issues	132	7.3	62.5
Citizen protection and security	131	7.3	69.8
Education	126	7.0	76.8
Employment and training schemes	102	5.7	82.4
Environment	98	5.4	87.9
Health	66	3.7	91.6
Attention to the citizen	47	2.6	94.2
Citizen participation	39	2.2	96.3
Public transport	30	1.7	98.0
Other	19	1.1	99.1
Housing	15	.8	99.9
Financial reporting	2	.1	100.0
Total	1800	100.0	

Figure 4.5 - Topic Frequency

A Kruskal-Wallis H test was performed, to determine if different topics caused a significant difference in engagement level. The test indicated that there is a significant difference, $H (15, N = 1800) = 67.746, p < 0.001$. Thus different topics do result in different engagement levels.

Follow-up tests were performed using the Dunn-Bonferroni method, to determine where there were significant differences between topics – these are contained in Appendix J. Additional follow-up tests were conducted using Mann-Whitney U, with a Bonferroni corrected significance level of $p < 0.00312$. The median engagement score for each topic is displayed below, in Figure 4.6.

Based on both the small sample size for some topics and the results of the post hoc follow-up tests, conclusions can not be reached for some topics on how more or less engaging they are than others. These topics are denoted in Table 4.6 with an asterisk (*) and grey text.

	Topic	Median
Engagement score	Attention to the citizen	2.04082
	Citizen participation*	.95641
	Citizen protection and security	1.64948
	Cultural activities and sport	1.02018
	Education	.92894
	Employment and training schemes	.95126
	Environment*	.85920
	Financial reporting*	5.80945
	Governance issues	.57928
	Health	.73844
	Housing*	2.26518
	Marketing/city promotion/tourism	1.58579
	Other*	.66613
	Public transport*	1.34792
	Public works and town planning*	.98434
	Social services	.85324

Note: '*' denotes post hoc test inconclusive

Figure 4.6 - Topic Median Engagement Scores

According to the post hoc Mann-Whitney U test, with a Bonferroni corrected significance of $p < 0.00312$, *attention to the citizen*, *citizen protection and security*, and *marketing/city promotion/tourism* are more engaging than *social services*, *education*, *health*, and *governance issues*. This places them near the top, as topics which encourage more engagement.

Cultural activities and sport is more engaging than *health* and *governance issues*. *Employment and training schemes* is more engaging than *governance issues*. This places these two topics – *cultural activities and sport* and *employment and training schemes* – as in the middle as far as engagement goes. Thus *governance issues*, *health*, *social services*, and *education* are at the lower end, as topics which citizens tend to engage less with.

However, caution should be exercised, as a larger sample size is needed to allow clearer ordering of topics by engagement level. The current data does not allow for a strict

ordering of topics by how much engagement they cause. It is clear, though, that topic does make an impact on engagement levels.

Type of Engagement

A chi-square test was performed on the cross-tabulation of topic and engagement type. Due to insufficient sample sizes, the topics of *citizen participation*, *financial reporting*, *housing*, *other*, and *public transport* were excluded from this and further analysis. The results indicated that a relationship exists between topic and engagement type, $\chi^2(50, N = 1695) = 213.641, p < 0.001$.

Topic	Engagement Type ^a						Count
	Base-level	One-way	Citizen-to-citizen dialogue	Citizen-to-government dialogue	No engagement	Total	
	% within Topic	% within Topic	% within Topic	% within Topic	% within Topic	Count	
Attention to the citizen	59.6%	21.3%	10.6%	0.0%	8.5%	47	
Citizen protection and security	42.0%	13.7%	24.4%	9.9%	16.0%	131	
Cultural activities and sport	60.6%	11.2%	13.9%	7.4%	10.8%	498	
Education	57.1%	4.0%	7.1%	0.8%	31.0%	126	
Employment and training schemes	62.7%	8.8%	12.7%	2.9%	13.7%	102	
Environment	58.2%	10.2%	11.2%	11.2%	15.3%	98	
Governance issues	50.0%	16.7%	8.3%	8.3%	19.7%	132	
Health	57.6%	4.5%	3.0%	0.0%	34.8%	66	
Marketing/city promotion/tourism	60.2%	11.2%	14.9%	5.6%	10.6%	161	
Public works and town planning	35.5%	16.0%	20.7%	10.1%	24.9%	169	
Social services	61.8%	8.5%	6.1%	4.2%	21.2%	165	
All Topics	55.5%	11.3%	13.0%	6.4%	17.1%	1695	

Percentages and totals are based on respondents.

a. Group

Note: Rounding results in some topics adding up to over 100%

Figure 4.7 - Percent of Engagement Type by Topic

The cross-tabulation of topic and engagement type is displayed in Figure 4.7, illustrating the percent of each engagement types that occurred for each topic. Base-level engagement is the most common type for all topics – it is only below 50% for *citizen protection and security* and *public works and town planning*. The other topics range from 50% to 62.7% for base-level engagement, with no one topic clearly more likely to receive more base-level engagement than any other. *Health* and *education* posts were most likely to receive no engagement at all, with both of those topics over 30%.

Citizen-to-citizen dialogue is most common for *citizen protection and security* and *public works and town planning* posts, the only two topics above 20%. Looking at *citizen-to-government dialogue*, *environment*, *public works and town planning*, and *citizen protection and security* posts were most common. However, these three topics are not as clearly on top as the two in *citizen-to-citizen dialogue* are.

To gain greater insight, a category was created by adding the citizen-to-citizen dialogue and citizen-to-government dialogue engagement types together, allowing analysis of which topics encouraged dialogue (regardless of its type). Another category was created by adding the two dialogue engagement types with the one-way engagement type, facilitating analysis of which topics encouraged any sort of non-base-level engagement. The results of this are contained below in Figure 4.8.

		Engagement Type			
		Citizen-to-citizen dialogue OR Citizen-to-government dialogue	Citizen-to-citizen dialogue OR Citizen-to-government dialogue OR One-way	Base-level	No engagement
		% within topic	% within topic	% within topic	% within topic
Topic	Attention to the citizen	10.6%	31.9%	59.6%	8.5%
	Citizen protection and security	34.3%	48.0%	42.0%	16.0%
	Cultural activites and sport	21.3%	32.5%	60.6%	10.8%
	Education	7.9%	11.9%	57.1%	31.0%
	Employment and training schemes	15.6%	24.4%	62.7%	13.7%
	Environment	22.4%	32.6%	58.2%	15.3%
	Governance issues	16.6%	33.3%	50.0%	19.7%
	Health	3.0%	7.5%	57.6%	34.8%
	Marketing/city promotion/tourism	20.5%	31.7%	60.2%	10.6%
	Public works and town plannning	30.8%	46.8%	35.5%	24.9%
	Social services	10.3%	18.8%	61.8%	21.2%
	All Topics	19.4%	30.7%	55.5%	17.1%

Note: Rounding results in some topics adding up to over 100%

Figure 4.8 - Percent of Engagement Type by Topic (with combined categories)

Looking first at the ‘citizen-to-citizen or citizen-to-government dialogue’ category, *citizen protection and security* and *public works and town planning* clearly are more likely to receive dialogue than other topics. This is still the result even when one-way engagement is added into the dialogue category, with *citizen protection and security* and *public works and town planning* remaining on top. Several topics are tied for second place in their likelihood to elicit dialogue, with *attention to the citizen*, *cultural activities and sport*, *environment*, *governance issues*, and *marketing/city promotion/tourism* all between 31% to 33%.

Conversely, *health* and *education* posts are the least common in both the dialogue category and in the combined dialogue and one-way category. Nearly 93% of *health* posts and 88% of *education* posts receive either base-level engagement or no engagement at all. When looking at the combined dialogue and one-way category, *social services* posts join *health* and *education* posts in their likeliness to receive less dialogue than other topics. Taken together, four out of five *health*, *education*, and *social services* posts receive either base-level or no engagement.

4.1.3: Intent

Level of Engagement

Figure 4.9 presents the frequency that different intents were used by councils in their Facebook posts. As seen, *delivering information* was by far the most common intent. The other five intents add up to be less than 15% of the posts.

Intent	Frequency	Percent	Cumulative Percent
Deliver information	1544	85.8	85.8
Engagement on another social media platform	25	1.4	87.2
External website engagement activity	44	2.4	89.6
Government website engagement activity	96	5.3	94.9
Offline engagement activity	78	4.3	99.3
Request feedback	13	.7	100.0
Total	1800	100.0	

Figure 4.9 - Intent Frequency

As the vast majority of posts had the intent to *deliver information*, the other intents had small sample sizes. To increase the sample sizes and better facilitate analysis, *external website engagement activity* and *government website engagement activity* were collapsed into their parent category of *website engagement activity*. This category has a frequency of 140 and contains 7.8% of the posts.

A Kruskal-Wallis H test was performed, to determine if different intents caused a significant difference in engagement level. The test indicated that there is a significant difference, $H (4, N = 1800) = 34.048, p < 0.001$. Thus different intents do result in different engagement levels.

Follow-up tests were performed using the Dunn-Bonferroni method, to determine where there were significant differences between topics. The full details of the post hoc tests are located in Appendix I. The median engagement score for each intent is also displayed below, in Figure 4.10.

Based on both the small sample size for some intents and the results of the post hoc follow-up tests, conclusions can not be reached for *engagement on another social media platform* and *request feedback* on how more or less engaging they are than other intents. They are denoted in Figure 4.10 with an asterisk (*) and grey text.

	Intent	Median
Engagement score	Deliver information	1.11136
	Engagement on another social media platform*	.60223
	Offline engagement activity	.45061
	Request feedback*	1.85787
	Website engagement activity	.50910

Note: '*' denotes post hoc test inconclusive

Figure 4.10 - Intent Median Engagement Scores

The results indicate that deliver information is more engaging than offline engagement activity and website engagement activity. The post hoc tests are inconclusive on whether offline engagement activity or website engagement activity are any more or less engaging than each other.

Type of Engagement

A chi-square test was performed on the cross-tabulation of intent and engagement type. Due to insufficient sample sizes, the intents of *engagement on another social media platform* and *request feedback* were excluded from this and further analysis. The results indicated that a relationship exists between intent and engagement type, $\chi^2(10, N = 1762) = 36.053, p < 0.001$.

Intent	Engagement Type ^a					Total
	Base-level	One-way	Citizen-to-citizen dialogue	Citizen-to-government dialogue	No engagement	
	% within Intent	% within Intent	% within Intent	% within Intent	% within Intent	
Deliver information	56.3%	11.3%	14.1%	6.6%	15.2%	1544
Offline engagement activity	53.8%	9.0%	5.1%	6.4%	26.9%	78
Website engagement activity	46.4%	14.3%	8.6%	7.1%	27.9%	140
All Intents	55.4%	11.5%	13.3%	6.6%	16.7%	1762

Percentages and totals are based on respondents.

a. Group

Note: Rounding results in some topics adding up to over 100%

Figure 4.11 - Percent of Engagement Type by Intent

The cross-tabulation of topic and engagement type is displayed in Figure 4.11, illustrating the percent of each engagement types that occurred for each intent. Base-level engagement is the most common type for all the intents. However, there is not a significant difference between the intents for most of the engagement types, apart from no engagement. *Offline engagement activity* and *website engagement activity* posts were most

likely to receive no engagement. *Deliver information* posts, on the other hand, were more likely to receive some type of engagement.

To gain greater insight, a category was created by adding citizen-to-citizen dialogue, citizen-to-government dialogue, and one-way engagement types together. This facilitates analysis of which intents encouraged any sort of non-base-level engagement. The results of this are contained below in Figure 4.12.

Intent	Citizen-to-citizen dialogue OR Citizen-to-government dialogue OR One-way	Base-level		No engagement
		% within topic	% within topic	% within topic
Deliver information	32.0%	56.3%	15.2%	
Offline engagement activity	20.5%	53.8%	26.9%	
Website engagement activity	30.0%	46.4%	27.9%	
All Intents	31.4%	55.4%	16.7%	

Note: Rounding results in some topics adding up to over 100%

Figure 4.12 - Percent of Engagement Type by Intent (with combined categories)

This combined category illustrates that *offline engagement activity* posts received less non-base-level engagement than *deliver information* and *website engagement activity* posts.

4.1.4: Phase I Summary

In summary, the data shows that media type, topic, and intent do cause differences both in the level and type of engagement. Rich media types such as *photo* and *video* cause statistically significant higher levels of engagement. *Video* and *photo* also – alongside *text* posts – result in greater dialogue types of engagement.

Attention to the citizen, citizen protection and security, and marketing/city promotion/tourism topics tend to result in higher levels of engagement. Conclusions could not be drawn for some topics, however, due to insufficient sample sizes of posts with those topics. Looking at engagement type rather than level, *citizen protection and security* and *public works and town planning* posts were more likely to result in greater dialogue types of engagement.

As for intent, *deliver information* posts resulted in statistically significant higher levels of engagement. As with topic, conclusions could not be drawn for some intents due to insufficient sample sizes. However, there was not much difference between engagement types for the different intents – apart from when looking at no engagement. *Offline*

engagement activity and *website engagement activity* posts were more likely to receive no engagement at all, in comparison to *deliver information* posts.

4.2: Phase II – Questionnaire

This section presents the results from the analysis of the questionnaire distributed to local government officials responsible for managing their council's Facebook page. 26 replies were received. Quantitative analysis was used for the close-ended questions and qualitative thematic analysis for the open-ended questions.

The full questionnaire data is available in electronic format – see Appendix J.

4.2.1: Official's Opinions on Engagement of Specific Topics and Media Types

Official's Opinion of Most Engaging Media Type

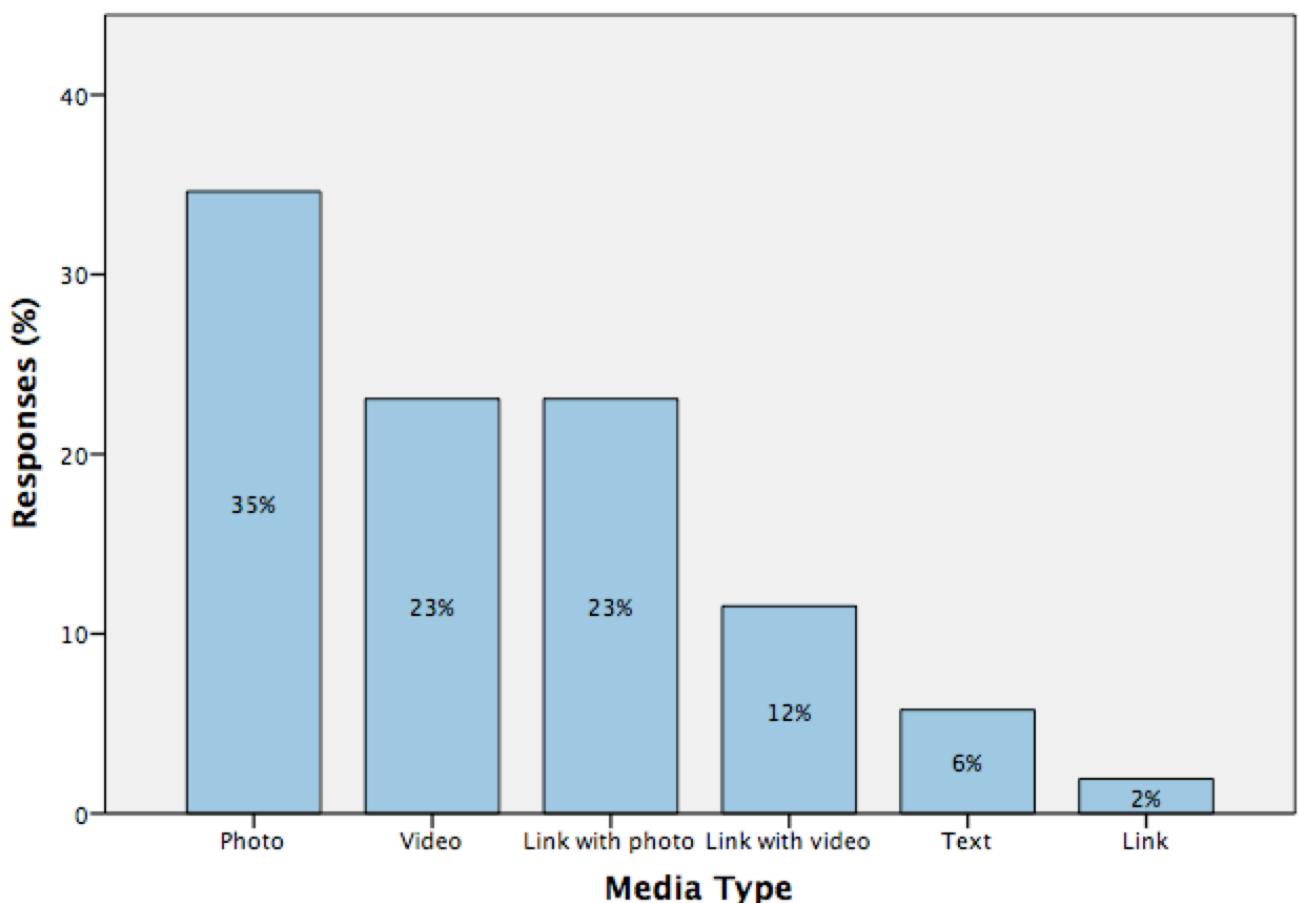


Figure 4.13 - Official's Opinion of Most Engaging Media Type (Question 2)

Figure 4.13 illustrates which media types officials thought bring more engagement when used in Facebook posts. Officials were asked to list their top two choices. *Photos* were selected as the most engaging media type, with *videos* and *links with photo* tied for second.

Official's Opinion of Most Engaging Topic

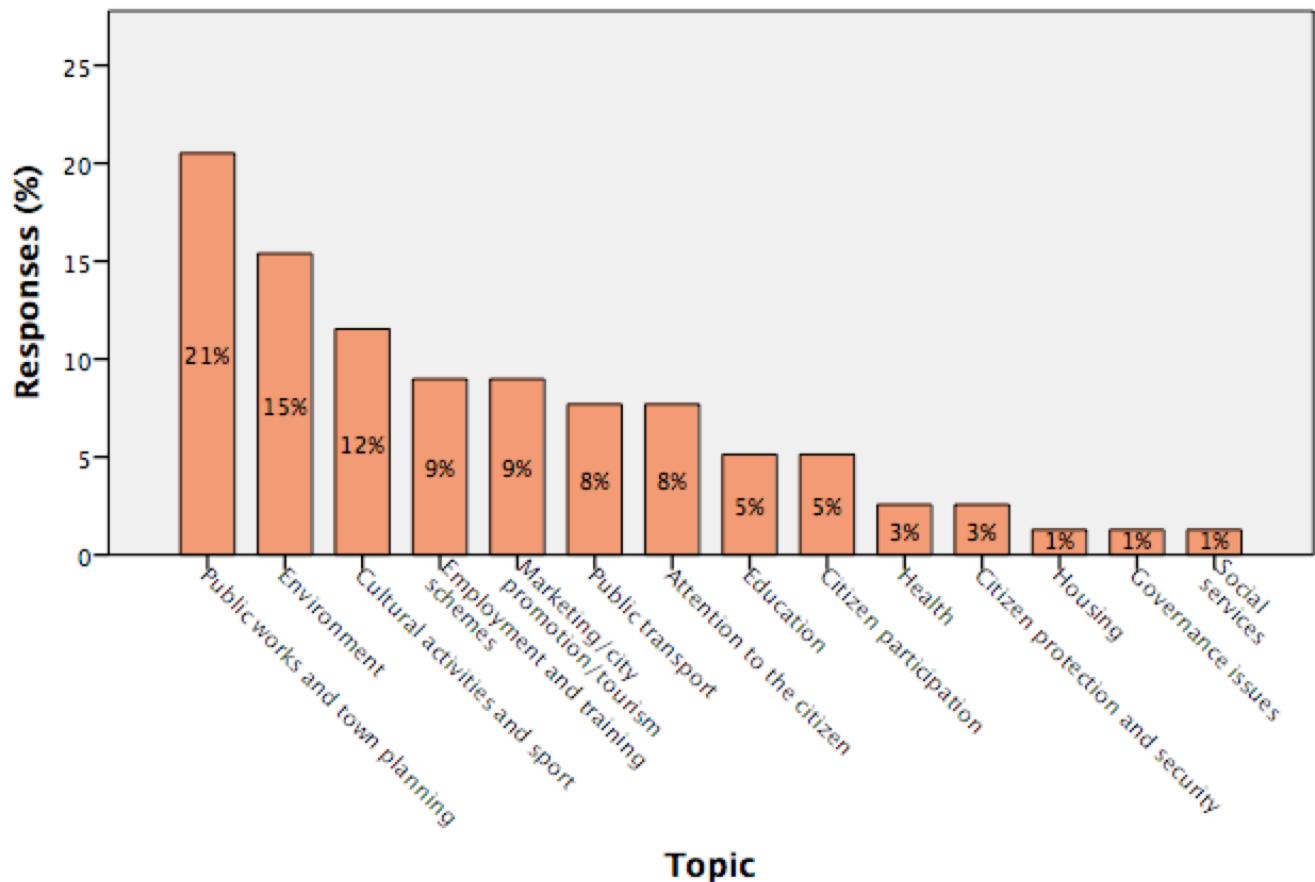


Figure 4.14 - Official's Opinion of Most Engaging Topic (Question 3)

The topics officials found most engaging are shown in Figure 4.14. Officials were asked to select their top three choices. *Public works and town planning* was the top choice, with *environment* second, and *cultural activities and sport* third. Notably, no respondents selected *financial reporting* as a topic that they considered among the three most engaging.

4.2.2: How Officials Seek Feedback from Citizens

Topics Officials Seek Feedback On via Facebook

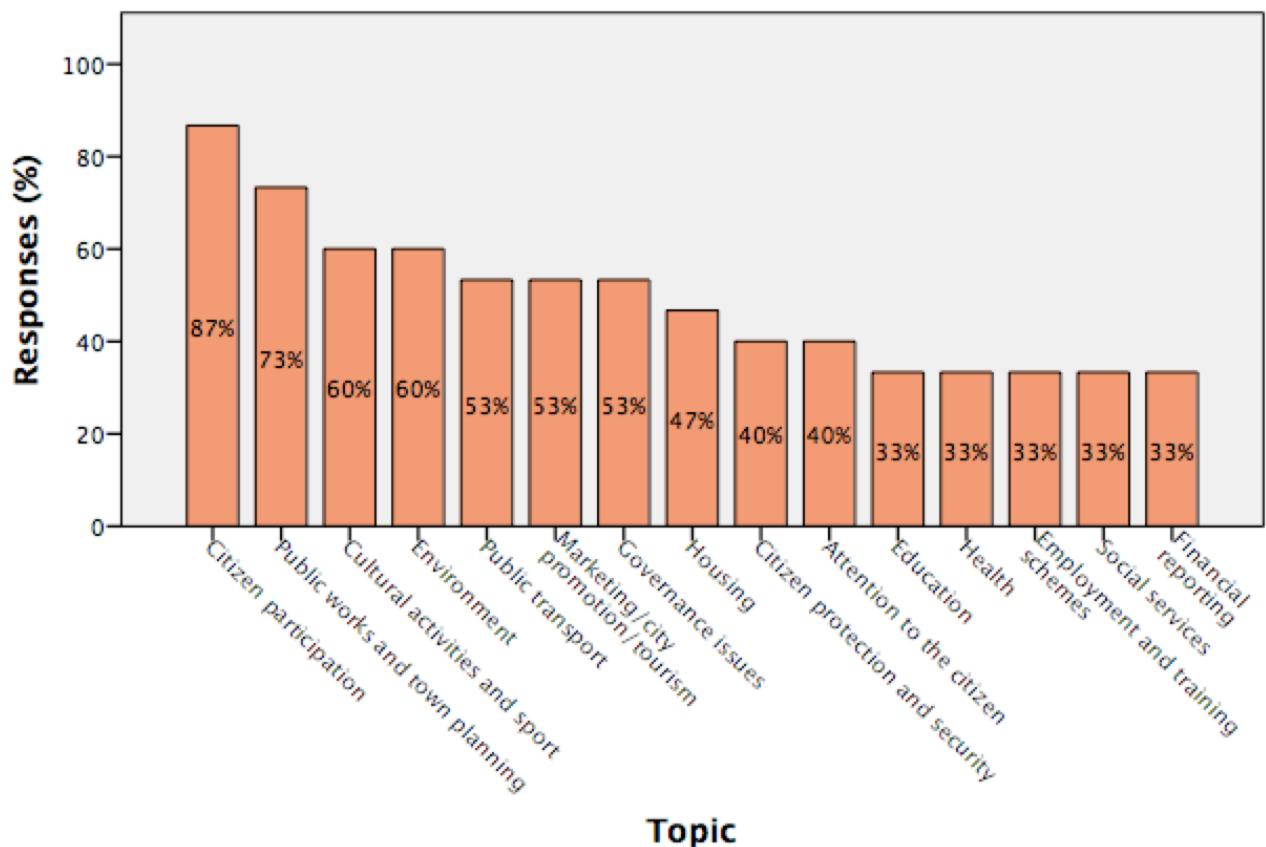


Figure 4.15 - Topics Officials Seek Feedback On via Facebook (Question 4A)

Nearly 58% of officials (15) stated that they use Facebook posts to seek feedback and opinions from users, with around 42% saying they do not. The officials who indicated that they did use Facebook to solicit feedback were asked to select which topics they used Facebook to get feedback on. The results of this are displayed in Figure 4.15.

Citizen participation was the most selected topic by a clear margin, with 87% of officials indicating they sought feedback on citizen participation. This was followed by *public works and town planning* in second and *cultural activities and sport* and *environment* topics tied in third. Every topic was mentioned by at least one of the respondents.

Methods Officials Use to Seek Feedback via Facebook

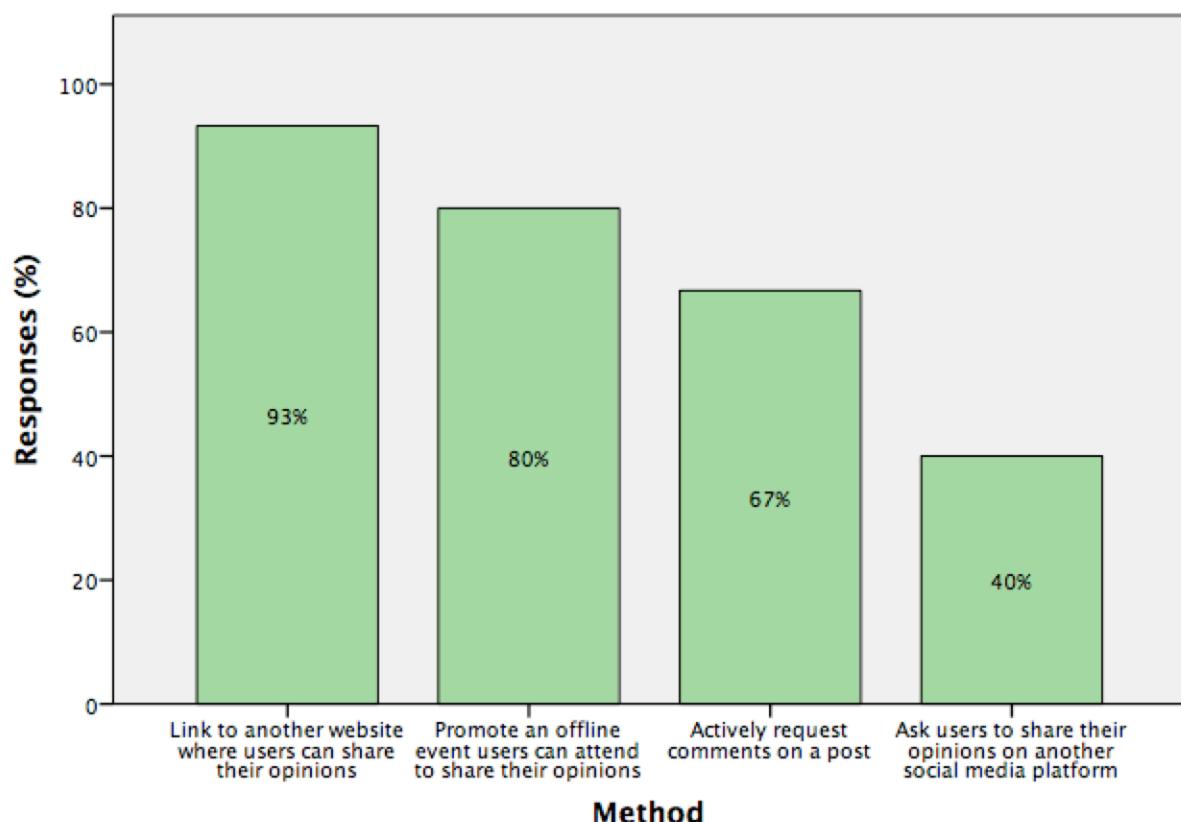


Figure 4.16 - Methods Officials Use to Seek Feedback via Facebook (Question 4B)

Officials who said they used Facebook to gather feedback were also asked which methods they made use of, the results of which are displayed in Figure 4.16. The four response choices in the questionnaire were designed to align with the intent coding scheme from Phase I of the study, as shown below in Figure 4.17.

Questionnaire Response	Intent Coding Scheme
Actively request comments on a post	Request feedback
Promote an offline event users can attend to share their opinions	Offline engagement activity
Link to another website where users can share their opinions	Website engagement activity
Ask users to share their opinions on another social media platform	Engagement on another social media platform

Figure 4.17 - Questionnaire Response Alignment to Intent Coding Scheme

The majority of respondents indicated they used *request feedback*, *offline engagement activity*, and *website engagement activity* methods when seeking feedback. Out of these, *website engagement activity* was by far the most selected response, closely followed by *offline engagement activity*.

Most Used Method to Seek Feedback via Facebook

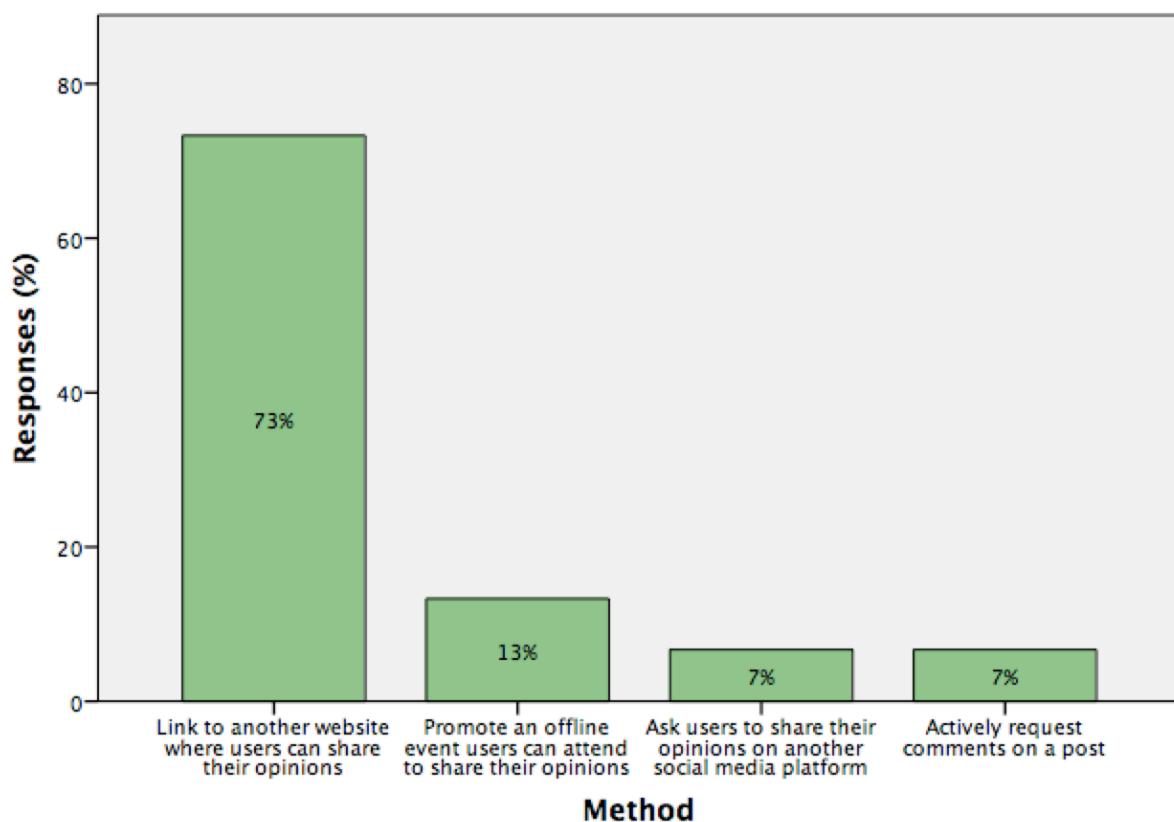


Figure 4.18 - Most Used Method to Seek Feedback via Facebook (Question 4C)

Officials were also asked which method they used most often to gather feedback from citizens, the results of which are shown in Figure 4.18. Once again, the four questionnaire response choices were designed to align with the intent coding scheme from Phase I of the study, as shown above in Figure 4.17.

The vast majority of respondents indicated that they use *website engagement activity* most often to gather feedback from citizens, with nearly three out of four selecting this response. The other three methods were near a virtual tie for last place, with *offline engagement activity* only ahead of *engagement on another social media platform* and *actively request comments on a post* by one vote.

Official's Opinion of Best Way to Seek Feedback via Facebook

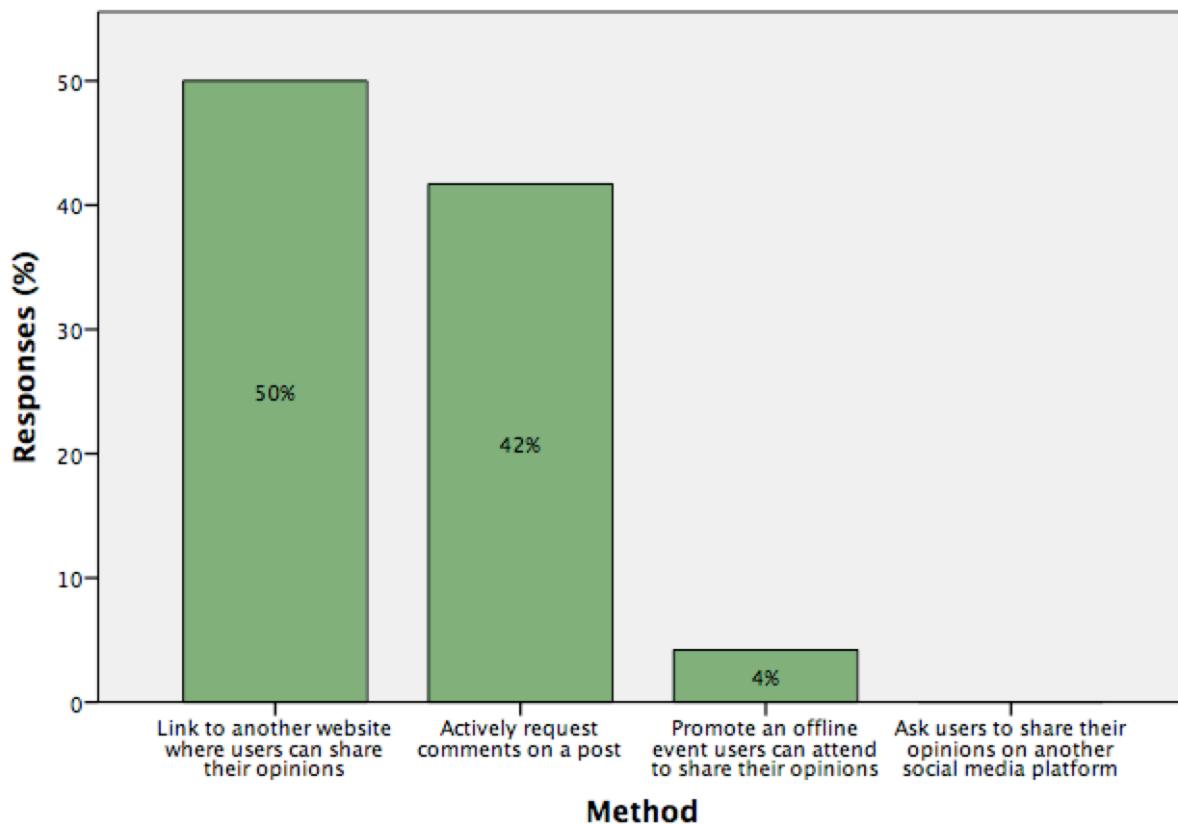


Figure 4.19 - Official's Opinion of Best Way to Seek Feedback via Facebook (Question 5)

All officials, not just those who indicated they use Facebook to gather feedback, were then asked which method of seeking feedback on Facebook they thought was best. 24 respondents replied to this question, displayed in Figure 4.19. As before, the four questionnaire response choices were designed to align with the intent coding scheme from Phase I of the study, as shown above in Figure 4.17.

A plurality of respondents (50%) selected the *website engagement activity* as the best way to seek feedback – the same method that officials indicated they use most often to seek feedback. *Request feedback* was the second most selected method at 42%, with only two less respondents choosing it than choose *website engagement activity*.

Why Officials Prefer Specific Feedback Methods

Officials were also asked to explain why they prefer a specific feedback method. In analysing the responses, several themes emerged. These are explored in Figure 4.20.

Theme	Subtheme	Concepts	Example Responses
Keep users on platform	Don't expect users to have to leave platform	Easier for users to keep using Facebook, might be unfamiliar with other platforms	<i>'...It's a lot easier, generally, for people to put a comment on, freestyle, than to answer a set of questions where they often feel we are leading them to a decision or conclusion we have already made... expecting people to shift channels (especially when our website isn't currently mobile responsive) is bad form.'</i> (Respondent 11)
	Greater quantity of feedback	Users prefer quick responses	<i>'...people expect instant gratification and quick responses using SM. Not to be sent somewhere else to engage.'</i> (Respondent 18)
Facebook not appropriate tool	Quality not quantity	More responses from Facebook than surveys, users likely to just leave feedback as comments anyways	<i>'We often ask people to feedback on a topic, by completing a survey which can be found by clicking on a link within a post. More often than not however, people tend to post their comments and opinions on the post itself.'</i> (Respondent 4)
	Citizens misunderstand issues	Facebook feedback of high quantity but low quality, survey feedback of low quantity but high quality, high quality content preferred	<i>'Whilst encouraging comment on social media is certainly the best way to ensure a large quantity of feedback from users, it doesn't always provide the best and most constructive feedback. Events and activities encourage a bit more commitment and involvement and will engage with the more constructive of your followers.'</i> (Respondent 5)
	Go off-topic, bring up political controversies		<i>'...In local government, formal consultations are very difficult to run in a way that incorporates social media as questions often lead to long explanations. These explanations can see others jumping into the conversation, often misunderstanding a response to a specific issue and trying to wrongly apply it to a wider context...'</i> (Respondent 6)
			<i>'...it is more difficult to collect comments from Facebook and draw conclusions from them... people tend to go off topic and pull in other (often political) decisions. You also get the same people answering all the time and making comments which may be off topic.'</i> (Respondent 11)

Figure 4.20 - Why Officials Prefer Specific Feedback Methods (Question 5)
(page 1 of 2)

Theme	Subtheme	Concepts	Example Responses
Facebook for survey promotion	Comments difficult to analyse	Large number of comments, council resource limits	<i>'For the citizen responding directly to Facebook posts would be the easiest option. However internal resource makes it almost impossible to manage this. The best way for the council to obtain feedback from across service areas is via consultation forms.'</i> (Respondent 12)
		Survey information collected consistent way, surveys easier to analyse	<i>'When we consult residents, we feel that directing them to an external survey enables us to capture the responses in a consistent way so we can analyse the data.'</i> (Respondent 23)
			<i>'Limitations of social media means it is difficult to record and code online responses in a meaningful way...'</i> (Respondent 26)
Facebook and surveys both have their merits	Improved response rate	Facebook promotion allows survey to collect greater feedback	<i>'This is the only way we have asked for users' opinions but we always have a good response when promoted on social media...'</i> (Respondent 8)
		Users already online making online survey easy	<i>'If by 'best' you mean 'most effective for generating responses', then online surveys tend to go furthest online - as users are already in that environment, and if kept succinct, can get their views across in minutes.'</i> (Respondent 21)
	More constructive and analysable responses	Survey information collected in consistent/structured way, structure/consistency facilitate easy analysis	<i>'Limitations of social media means it is difficult to record and code online responses in a meaningful way. However where there is significant interest in a consultation topic providing the opportunity for stakeholders to give a full response that will be evaluated properly which is marketed via social media is an effective way of increasing engagement...'</i> (Respondent 26)
N/A		Facebook feedback good for fast/easy informal feedback, Facebook not best source for high quality feedback, There is a time & place for use of both Facebook and survey feedback mechanisms	<i>'This is an equal split between requesting and linking in my opinion. Requesting gives you a good temperature check on an issue. Linking gives you a more considered set of responses (albeit fewer).'</i> (Respondent 7)
			<i>'Although we get feedback on posts about big issues on facebook, we only use these as informal/anecdotal information and as a way to inform future posts/messages.'</i> (Respondent 6)

Figure 4.20 - Why Officials Prefer Specific Feedback Methods (Question 5)
(page 2 of 2)

4.2.3: What Officials Do with Feedback

100% of respondents stated that they capture and pass on the feedback citizens leave as comments to the appropriate council department. Several themes emerged as to how exactly councils manage this feedback, and are explored in Figure 4.21 below.

Theme	Subtheme	Concepts	Example Responses
Feedback always passed on	Both positive and negative feedback passed on	Everything is forwarded to relevant department, doesn't matter if compliment/complaint/request	<i>'Everything, complaint, request or compliment is sent on to the relevant department.' (Respondent 18)</i>
		Departments contacted to help respond to citizens requesting responses	<i>'Feedback is forwarded to other departments, both positive and negative - should a comment ask for a response this is sought and responded to.' (Respondent 17)</i>
	Keep departments aware	Good for departments to be up-to-date on issues relating to them on Facebook	<i>'Largely these seem to be complaints or questions related to a department. We think it is useful for our departments to know what is being said via social media.' (Respondent 19)</i>
		Helps departments address potential issues, use system to keep departments aware (weekly screenshots)	<i>'We take weekly screencaps of trending topics and send them to project managers so that they are aware of any issue/problem/interest...' (Respondent 5)</i>
		Use more complex systems to keep departments aware (e.g. daily digests or CRM systems)	<i>'Comments from users and responses given are collated into a daily digest which is sent to Senior Management Team and the executive Leader.' (Respondent 26)</i>
			<i>'We always take a screenshot of this information and forward it onto the council's Customer Services team who manage the corporate CRM system. These opinions can then be logged appropriately and passed onto the relevant team.' (Respondent 4)</i>

Figure 4.21 - What Officials Do with Feedback (Question 6)

(page 1 of 2)

Theme	Subtheme	Concepts	Example Responses
Feedback sometimes passed on	Citizen enquiries	Always answer citizen enquiries when possible, pass on feedback to department if not able to answer enquiry satisfactorily	<i>'Social media monitoring is done by our customer service correspondence team, they respond to customer service enquiries via FB... and will forward on relevant posts if appropriate.'</i> (Respondent 21)
	Genuine/controversial feedback	Only 'genuine' feedback passed on	<i>'We try to answer all questions on social media, so questions will be passed on to council officers to help answer... '</i> (Respondent 3)
		Genuine feedback doesn't include using posts as way to repeatedly make negative politically motivated comments, political comments/concerns often dismissed by senior officials	<i>'If the feedback, or question, is reasonable and genuine then we will pass this on to the relevant department and provide a response where possible.'</i> (Respondent 10)
		Emphasis on passing on complaints or feedback on controversial issues, lots of feedback saying similar thing more likely to be passed on	<i>'... Sometimes it's the same people who just use every single post from the authority to make a political comment and while I would like those in senior positions to pay more attention to them and enable us to respond to their concerns (because it's right the council should be held to account), I know that the comments are dismissed. There tends to be a request to 'hide' comments if people are negative, rather than addressing the issues.'</i> (Respondent 11)
Constantly monitoring feedback	N/A	Combination of <i>feedback always passed on</i> and <i>feedback sometimes passed on</i> themes, <i>Feedback always passed on</i> – monitor so urgent matters can be expedited, <i>Feedback sometimes passed on</i> – monitor so can determine what to pass on	<i>'If it's relevant - especially when it's a complaint.'</i> (Respondent 1)
			<i>'Sometimes - if it is a controversial topic and lots of people are saying the same thing.'</i> (Respondent 14)
<i>'... We also have customer service advisers checking out content for urgent requests and complaints about local services.'</i> (Respondent 5)			

Figure 4.21 – What Officials Do with Feedback (Question 6)
(page 2 of 2)

4.2.4: How Officials Decide What to Post About

Several themes were identified for how officials decide what topics to create posts for on Facebook. These are listed in Figure 4.22.

Theme	Subtheme	Concepts	Example Responses
Engaging topics	Quick and easy topics	Post on topics easy for government to write but with high engagement, use of photos easy and engaging	<p>‘... “Quick wins” - so what will drive the most engagement in an easy, non-time consuming way. Posts with photos are always good to put on.’ (Respondent 1)</p> <p>‘Traditionally we've been quite relaxed about the subjects we post to Facebook, trying to find the ones which will get the best interaction. If something has a photo accompanying it, it has a better chance of being posted to Facebook..’ (Respondent 11)</p>
	Relevant and interesting topics	Posts need to be relevant and interesting	<p>‘Post about topics which we know are interesting to our Facebook demographic.’ (Respondent 8)</p> <p>‘We think about what would be of interest or useful to local residents.’ (Respondent 14)</p>
	Limited by Facebook algorithm	Posts with greater likes/shares/ comments receive greater publicity, constrains what topics council can post on	<p>‘There are two main drivers to our decision making (which are quite often diametrically opposed); our statutory duty to warn and inform the public and the effects of Facebook's Newsfeed Algorithm which... has a massive ongoing effect on what people actually see from us in their newsfeed.</p> <p>With the algorithm blocking ~70% of posts from reaching people's newsfeed we always aim to mix posts we know will be popular to drive up our reach (weather warnings, jobs round-ups) with messages we have a need to post which tend to be less popular (nobody is going to "like" gritters going out but we need to warn people) and - when we're lucky from a reach perspective - occasionally we get to do both (scam warnings, large scale roadworks/diversion maps etc).</p> <p>So when we're free to decide we're very much dictated to by Facebook; posts need to be countywide and have broad appeal otherwise they're pointless as there's no engagement to drive reach and no one sees them. Also... they need to be very much about what's in it for residents rather than what the council wants to promote.’ (Respondent 6)</p>

Figure 4.22 - How Officials Decide What to Post About (Question 1)
(page 1 of 3)

Theme	Subtheme	Concepts	Example Responses
Monitor which topics citizens find engaging	Engaging topics generate a lot of shares and likes	Engaging topics generate a lot of shares and likes	<i>'It is a mixture between topics that are of use to residents and will generate shares and likes, and topics on subjects the council wants to promote. We don't want our Facebook page to be purely key messages - we want it to be a resource that people go to to find out what is going on in the city.' (Respondent 3)</i>
	Analyse past posts to find what best engages citizens	Analyse past posts to find what best engages citizens	<i>'Based on analysis of previous engagement, we focus on topics that we believe relevant and interesting to our audience.' (Respondent 24)</i> <i>'Whatever is relevant and a big issue at the time. Taking into account the statistics of historical posts.' (Respondent 18)</i>
Current council campaigns	Formal planning	Post about current planned strategic campaigns	<i>'We have specific campaigns led by our marketing/communication leads within the councils Strategic Communications team. Therefore we post regularly to tie in with the planned projects and campaigns for each department...' (Respondent 16)</i>
	Use formal up-to-date communication plan as guide to creating posts	Use formal up-to-date communication plan as guide to creating posts	<i>'The council's Corporate Management Team approve a quarterly "Media Planner" which forms the basis for the Communications Team's primary focus over that quarter. The items highlighted on this planner are posted on Facebook as a matter of course...' (Respondent 4)</i>
			<i>'Based on media communications planner which is updated on an ongoing basis and upcoming topics highlighted by Senior Management Team. These will be balanced with media content which draws attention to the page and stimulates discussion to help maintain and grow the follower base.' (Respondent 26)</i>
Council events and consultations	Keep public updated about what is going on in council and other government organisations	Keep public updated about what is going on in council and other government organisations	<i>'As a Council, we post about what is happening around us. Be that to give information about events, committee meetings, press releases, traffic information, school closures. We also share information from partners e.g The Health Board, National Park, in order to keep the public up to date.' (Respondent 22)</i>
	Encourage citizens to take part in consultations and other decisions	Encourage citizens to take part in consultations and other decisions	<i>'They are all linked to campaigns running at the council to help deliver the council's priorities, or about decisions taken by the council. We also use Facebook to encourage residents to get involved in decision making...' (Respondent 13)</i>
	Update public on campaigns and related events	Update public on campaigns and related events	<i>'We post about council events and campaigns, this can include public health campaigns or energy projects for example...' (Respondent 10)</i>

Figure 4.22 – How Officials Decide What to Post About (Question 1)

(page 2 of 3)

Theme	Subtheme	Concepts	Example Responses
Events and news from local community	N/A	Focus on local community, keeping citizens up-to-date, emphasis on community events	<p><i>'We think about what would be of interest or useful to local residents.. news about Council decisions, updates on projects around the town and upcoming events... We sometimes share stories from the local paper, and provide an explanation if we feel further information is necessary.'</i> (Respondent 14)</p> <p><i>'We post all of our news releases on Facebook, post regularly about ongoing campaigns throughout the organisation i.e. Lincolnshire Energy Switch, register to vote, festivals and events, we also share posts from our arts centres accounts and get involved in national campaigns.'</i> (Respondent 23)</p>
Departments request posts	N/A	Council departments request posts on specific issues	<p><i>'We post anything that teams bring to our attention, whether it is library events, road works, etc., etc.'</i> (Respondent 15)</p> <p><i>'As part of [the] communications team... we may also receive requests from other departments asking us to post on their behalf.'</i> (Respondent 9)</p>
		Not all requested posts are always granted	<p><i>'...further requests... [come] in from across the council on an ad hoc basis. The council's Digital Media Officer uses his discretion and anecdotal experience to determine whether these topics should also be posted.'</i> (Respondent 4)</p>
Service updates and emergency warnings	Updates on services	Inform of service closures or changes	<p><i>'Driven by day-to-day customer service requirements (closures, events etc....'</i> (Respondent 21)</p> <p><i>'[We post] any updates about key services such as bins or traffic which can affect a large number of residents.'</i> (Respondent 11)</p>
	Emergency communication	Allows quick communication, useful for severe weather or other incidents	<p><i>'We also use Facebook to... communicate quickly with residents during emergencies.'</i> (Respondent 13)</p> <p><i>'...We also use it to communicate emergency information, for example when there is severe weather such as flooding and snow...'</i> (Respondent 14)</p> <p><i>'Warn and inform: posts that inform about major consultations or incidents always go on.'</i> (Respondent 7)</p>

Figure 4.22 – How Officials Decide What to Post About (Question 1)
(page 3 of 3)

4.2.5: Difficulties in Engaging

Officials were asked how well they believed their council was engaging with citizens on Facebook. The results are displayed in Figure 4.23. The responses were skewed towards the positive side, with a large majority of officials – nearly 85% -- ranking their council's performance average or better. No officials selected 'extremely poorly'.



Figure 4.23 - Effectiveness of Council in Engaging with Citizens (Question 7)

Barriers to Engagement

Officials were also asked about the most significant barriers preventing them from better engaging with citizens on Facebook. A number of key themes emerged from these responses and are displayed in Figure 4.24.

Theme	Subtheme	Concepts	Example Responses
Lack of resources	Lack of time, staff, experience, money	Lack of resources include time, staff, staff experience, and money	<p><i>'Lack of time and resource. I think there needs to be a dedicated social media officer.'</i> (Respondent 1)</p> <p><i>'Time invested in managing the page and capacity/ skills of the team.'</i> (Respondent 2)</p> <p><i>'Resources - would like to be able to dedicate more officer time to FB and have a more proactive engagement strategy but not enough resource.'</i> (Respondent 20)</p> <p><i>'...Other barriers include level of staff familiarity/training required to generate effective posts.'</i> (Respondent 21)</p>
		Additional work of social media, government budget cuts, connection of lack of funds to lack of time/staff/staff experience	<p><i>'Time/resources! Social media is increasingly important to us as a council, but it hasn't replaced anything, so it's additional work, and with government budget cuts, our staff numbers are shrinking so we have no chance of extra resource to deal with it. We do our best, but there's always hesitation to do too much engagement because it's not only difficult for the comms team to deal with, it's difficult for the service area to deal with - there are only so many hours in the day, and if you run out of time to deal with something on Facebook, you're perceived to have publicly failed.'</i> (Respondent 13)</p>

Figure 4.24 - Barriers to Engagement (Question 8)

Theme	Subtheme	Concepts	Example Responses
	Facebook algorithm	Promoted posts receive greater reach and engagement, lack of funds, citizens unaware of algorithm effect	<p><i>'Facebook's algorithms now promote boosted posts, so the most significant barrier at the moment is a lack of money to boost posts. When we do find money to boost a post (even £3 or £10) we see markedly improved reach and engagement - which we can then use to get more likes.' (Respondent 3)</i></p> <p><i>'...The only real barrier is Facebook itself, with the algorithm effect we often cannot make information reach its intended target without paying so a large proportion of the public (and even our own followers) won't see posts to engage with even if they would have been interested in them - they also aren't aware that Facebook is acting in this way so we often get complaints from followers on Facebook asking why we didn't promote a certain event when we actually did.' (Respondent 6)</i></p>
			<p><i>'We are currently reviewing our social media presence, with the aim to create a modern social media strategy. Concerns include post reach, which seems to be a lot lower than a pages 'likes' would suggest. Cost is a barrier, as paid ads/post appear to be more effective at reaching the required audience....'</i></p> <p><i>(Respondent 21)</i></p>
Council structure	Need for professional voice	Professional voice less engaging than more personal tone	<p><i>'Maintaining professional output: it is more engaging to users if you respond on a personal level however as responses are on behalf of an organisation a more formal tone is used than would be used in other circumstances.'</i> (Respondent 26)</p> <p><i>'The need to maintain a corporate voice and balance.'</i> (Respondent 7)</p>
	Lack of communication tracking	Deficiency in internal communication restrict engagement	<p><i>'A lack of communication internally. For example - if a refuse lorry breaks down and refuse collections in a particular area do not to take place, often the first the Communications team know about it is when residents start complaining on social media that their collections haven't taken place. If we were made aware of these things from the outset, we could be proactive in communicating these details to residents - and ultimately be in a stronger position to engage with residents in a positive way.'</i> (Respondent 4)</p>

Figure 4.24 – Barriers to Engagement (Question 8)
(page 2 of 3)

Theme	Subtheme	Concepts	Example Responses
Lack of interest and negativity by citizens		Better tools for communication management would help	<i>'...Better tools for customer services and communications team to manage social media.' (Respondent 16)</i>
	Required to share non-engaging content	Council required to share certain content that isn't very engaging	<i>'...Computer systems that enable tracking of communications sent to people on social media.' (Respondent 8)</i>
	Risk averseness	Holds back engagement potential, bureaucratic barriers, restricting who can use social media	<i>'...In order to use social media sites officers have to submit a business case and are then placed on a quota system where they can access these pages for a limited time during the day only. The communications team can view and post at any time but this is only a very small team of people and we are often limited by other priorities.' (Respondent 9)</i>
Lack of interest and negativity by citizens	Lack of interest	Citizens not interested in engaging with council, not many citizens like council page	<i>'Low number of people who like our page. Less than 1% of our district's population like our Facebook page.' (Respondent 24)</i> <i>'The fact that some residents don't particularly want to Like/follow their local council.' (Respondent 15)</i>
	Negativity	Negative perceptions of citizens make them not interested in engaging, negative feelings on sensitive political issues complicate the problem	<i>'The negative perceptions some people have of the Council.' (Respondent 14)</i> <i>'General negative feeling towards the council means anyone who has a differing opinion, or would like to ask a question tends to be shouted down.</i> <i>Difficulty getting a clear response because of sensitivities to some of the issues raised on social media.' (Respondent 11)</i>

Figure 4.24 – Barriers to Engagement (Question 8)
(page 3 of 3)

Areas for Improvement

Officials were asked about how they most wanted to improve upon in engaging with citizens on Facebook. Themes from the responses are identified in Figure 4.25.

Theme	Subtheme	Concepts	Example Responses
Improve strategic planning	Develop formal strategies	Strategy for how to use social media	<i>'We are currently in the process of putting together a social media strategy to review how best to move it forward and to engage with customers in the most effective way.'</i> (Respondent 27)
	Monitor what encourages engagement	When developing strategic plan think about what type of posts engage citizens best	<i>'Studying our posts to determine what content people are most interested in and try to continue with this kind of content.'</i> (Respondent 21)
	Utilise tools	Tools can help better plan engaging content as part of social media strategy	<i>'I'd like to be more strategic with our posts, thinking about tone, time of day and other content (image/video) in the context of our overall schedule.'</i> (Respondent 25)
Improve posts	N/A	Make posts more engaging, utilise more multimedia/video, graphical ways of communicating, engaging style/tone	<i>'... We are also testing out Power Editor, with the view that the better the ad targeting the better the engagement.'</i> (Respondent 2)
Expand operating hours	N/A	Citizens do not engage on Facebook only during traditional office hours,	<i>'We are working towards producing videos to promote the council's activities as a matter of course. We are also playing around with more clickbait-style headlines and producing more content that provides useful information about, say, events this summer or a jobs fair...'</i> (Respondent 2)
		Citizens expect timely responses, timely responses contribute to dialogue	<i>'Using video and info graphics to explain things in a more visual format.'</i> (Respondent 22)
			<i>'Looking at the Insights behind the page we can see audience engagement climbs throughout the day peaking at around 9pm. So this would be the best time to share posts. However we don't like doing this outside of core hours when it's obvious posts are scheduled rather than 'live' and the page isn't monitored for responses to comments from citizens.'</i> (Respondent 13)
			<i>'Improved response times to comments would help to continue a conversation which would give a better service to the residents commenting and potentially generate more useful comments.'</i> (Respondent 11)

Figure 4.25 - Areas for Improvement (Question 9)
(page 1 of 2)

Theme	Subtheme	Concepts	Example Responses
Improve organisational communication	N/A	Lack of internal communication limits engagement potential, only small segment of council actually engaging with citizens rather than on all levels	<i>'Not having to direct them to send an e-mail to customer services to get a personal issue response. With highways issues, the department doesn't respond to public complaints so we then get follow-up complaints.' (Respondent 12)</i> <i>'More customer service engagement on all levels of our organisation would be better...' (Respondent 4)</i>
Encourage greater feedback	N/A	Councils want greater citizen feedback, particular interest in more positive feedback, desire feedback of constructive nature	<i>'We would like to improve on positive feedback. We find that facebook is usually used by our residents as a way of complaining and making negative comments regarding the Council and our officers/services.'</i> <i>'We'd like more positive and constructive feedback. We have a high number of Facebook Likes - we'd like more people to actively engage on the page.' (Respondent 18)</i>
		Encourage constructive policy debates, crowdsource questions for meeting	<i>'Get people involved in sensible debates about how services can be delivered differently in light of budget cuts.' (Respondent 17)</i>

*Figure 4.25 – Areas for Improvement (Question 9)
(page 2 of 2)*

Past Improvements

Officials were asked what steps they had taken in the past to improve engagement on Facebook. A number of themes were identified and are listed in Figure 4.26.

Theme	Subtheme	Concepts	Example Responses
Improve monitoring	Use of statistics	Better monitoring allows creation of posts using techniques that deliver greater engagement, tracking of posts, use of engagement statistics	<p><i>'Looked at our analytics to see what content worked and had most engagement & tried to do more.'</i> (Respondent 25)</p> <p><i>'...we're constantly increasing our knowledge of how Facebook works and monitoring, reporting on and analysing statistics to see what posts work and what don't to hopefully give the public more of what they want.'</i> (Respondent 6)</p>
	Use of social media management tools	Help better monitor council's Facebook page, improve internal communication by facilitating and tracking handoff of citizen feedback between departments	<p><i>'Monitoring has helped us reformulate the way we write messages and what times to send them to help encourage engagement.'</i> (Respondent 7)</p> <p><i>'We are introducing improved social media management tools to improve how we manage our social channels.'</i> (Respondent 10)</p>
Use multimedia	Upload videos to Facebook	Videos hosted directly on Facebook greater reach, greater reach increases engagement, videos do well under Facebook newsfeed algorithm	<p><i>'We've got a better system of communicating with customer services but we will be looking at getting social media management software to help better monitor responses and transfer between depts. on the same channel.'</i> (Respondent 11)</p> <p><i>'Use of videos and removing links to external sites. Facebook boosts posts that have natively-hosted video and do not link away from Facebook. The more people you reach the greater the engagement.'</i> (Respondent 3)</p> <p><i>'Recently we've started uploading video straight to Facebook as the reach and engagement works incredibly well at present.'</i> (Respondent 12)</p>
	Greater use of photos	Photos to convey information rather than text, creation of unique photos for campaigns	<i>'We have increased our visual engagement and design cover photos and images for campaigns.'</i> (Respondent 23)

Figure 4.26 - Past Improvements (Question 10)
(page 1 of 2)

Theme	Subtheme	Concepts	Example Responses
Improve response	N/A	<p>Not replying dissuades citizens from engaging, replying to posts helps create dialogue</p> <p>Respond to citizen feedback quickly and efficiently, social media management software can help, dedicated teams can help</p>	<p><i>'I have encouraged conversation on popular topics and responded to queries when they are presented to me. Allowing your channel to become a one-way soapbox will see followers tune out quickly.' (Respondent 5)</i></p> <p><i>'While initially the feedback/comments/queries were handled by the communications team, we've now separated these responsibilities with outgoing messages handled by comms and incoming messages from the public handled by our Customer Services team so there are consistent responses (and timeframes for these responses) for contacting the council regardless of whether this is via social media or more traditional methods.' (Respondent 6)</i></p> <p><i>'Implementation of correspondence team to respond to Facebook enquiries during office hours.' (Respondent 21)</i></p>
Direct engagement activities	N/A	<p>Explicitly encourage citizens to engage, ask citizens to share posts/send photos/give feedback/take part in contests</p>	<p><i>'Asking them directly to engage e.g. share a photo, tell us what you think. Competitions.'</i> (Respondent 14)</p> <p><i>'Encourage users to share posts amongst family/friends/neighbours.'</i> (Respondent 8)</p> <p><i>'We have trialled different ways including paid for advertising, surveys, pointing to consultation pages, asking for peoples own images to be uploaded for a council competition.'</i> (Respondent 9)</p>
Facebook advertising	N/A	Paying to promote posts helps post reach/engagement	<i>'We have recently started to explore Facebook advertising which has seen some positive results.'</i> (Respondent 15)
Change tone	N/A	Shift to using informal and personable style, better than impersonal and formal business-like style	<p><i>'... We have also changed the tone of posts to be more friendly and chatty and less corporate and formal.'</i> (Respondent 17)</p> <p><i>'Changing the tone of voice - more personal, less corporate.'</i> (Respondent 24)</p>

Figure 4.26 – Past Improvements (Question 10)
(page 2 of 2)

4.2.6: Phase II Summary

The questionnaire results provide a view into the world in which officials managing Facebook pages for local government operate. Officials have clear views that richer media types – such as photos and videos – invoke greater engagement. They also clearly view posts about *public works and town planning* to be more engaging, followed by *environment* and *cultural activities and sports* posts. A slim majority of officials state they use Facebook to seek feedback from users, with those that do seeking feedback on a wide range of topics – with *citizen participation* and *public works and town planning* topics most popular.

A majority of officials use links to external sites, promoted offline events, and active requests for comments as methods to seek feedback on Facebook. Links to external sites, such as surveys, is by far the most used method. However, officials are nearly split on which method is best, with only a slim plurality saying that links to external sites are superior to actively requesting comments on posts.

This split is down to conflicting views of whether its best to keep users on the platform – not expecting them to have to leave it for a survey site – or rather if Facebook is not actually an appropriate tool to gather feedback, leading to a high quantity but low quality of feedback. Also of concern is whether feedback on Facebook is too difficult to properly analyse, and if Facebook isn't actually better used as a way to promote surveys. Others see merits on both sides, saying Facebook is best for a quick informal check of opinion but surveys provide more robust reliable data.

Nearly all officials say they pass on citizen feedback, with a split between those who always pass it on and those who sometimes pass it on. Some believe it's best to always keep departments aware of what is going on, constantly monitoring feedback. Others hold that sometimes feedback is simply repetitive negative political comments, which is not useful to pass on to council departments. In deciding what to post about, officials look for content that they know from experience easily engages citizens, current council campaigns, events from the local community, service updates and emergency warnings, and requests for posts from council departments.

The vast majority of officials are positive on how their council is performing on engagement, with nearly 85% ranking their performance as average or above. Still, they identify barriers to engagement in a lack of resources, deficiencies due to the council's organisational structure, and lack of interest and negativity from citizens. Officials would like to improve their engagement by taking up greater strategic planning, improving the content of posts, expanding operating hours for responses, and improving internal council communication.

Many officials have already been working to improve engagement with citizens. In the past they have improved their monitoring of posts, made greater use of multimedia content, improved their response level and speed, made use of engagement activities such as contests, adapted their tone, and experimented with Facebook advertising and promotion.

Chapter 5: Discussion

This chapter places the results in context of other research and work conducted in e-government and social media. It also discusses implications and recommendations for local governments. It is organised into six main sections as follows, with Sections 5.2-5.5 also containing recommendation to councils:

- 5.1: Research Objectives
- 5.2: Impact of Media Type on Engagement
- 5.3: Impact of Topic on Engagement
- 5.4: Impact of Intent on Engagement
- 5.5: Council Efforts to Increase Engagement
- 5.6: Validity, Scope, and Generalizability

5.1: Research Objectives

To reiterate, this project aimed to accomplish the following:

- Discover what impact different *media types* (e.g. photos, videos, links, text) in posts has on engagement level and type
- Discover what impact different *topics* (e.g. housing, transport, education) in posts has on engagement level and type
- Discover what impact the *intent* (e.g. deliver information, request comments, encourage offline engagement) of posts has on engagement level and type
- Explore how government officials managing social media attempt to encourage engagement with citizens and how well they feel they are doing so
- Develop best practice recommendations for local government in encouraging engagement with citizens

5.2: Impact of Media Type on Engagement

The data from the content analysis of Facebook posts confirms that media type does have an impact on engagement level and type. Looking first at engagement level, rich media types proved to be most engaging, with *photo*, *video*, and *link with photo* bringing greater engagement. This is consistent with the findings of Bonsón et al. (2015), Hofmann et al. (2013), and Malhotra et al. (2013) that the use of rich multimedia content results in greater engagement on social media.

Official's opinions are also in agreement that that these media types result in the most engagement, as evidenced by their responses to the questionnaire. Council officials are clearly already making an attempt to embed rich multimedia content in their posts, as over 50% of the Facebook posts analysed consisted of the *link with photo* media type. Councils have also taken steps in the recent past to increase their use of multimedia in posts, striving to use greater photos and videos.

Considering engagement type, it's not surprising to see that once again *photo* and *video* are on top when it comes to encouraging dialogue – whether that be between citizens or between citizens and government. This is a key benefit of social media use by local government, as dialogue represents a higher form of engagement than base-level engagement (e.g. only liking or sharing the post). In Lee and Kwak's (2012) social media

maturity model, citizen-to-citizen dialogue represents a step up to *open participation*, where the government can begin to crowdsource feedback from citizens.

Citizen-to-government dialogue moves even higher to *open collaboration*. This was not very common in the posts analysed, with a much greater number of posts involving citizen-to-citizen dialogue and one-way engagement. In fact, for citizen-to-government dialogue *text* posts came top; this is a surprising result, as it appears to go against past research that text posts are not as engaging as rich multimedia posts. Indeed, it also is in conflict with the engagement score of text posts, which is correspondingly lower than richer media types.

This means that text does not receive as high a level of engagement as rich media types, but out of the engagement it does receive a greater proportion is made up of dialogue – in line with the proportion of dialogue *photo* posts receive. This is confirmed by looking at the proportion of *text* posts that receive no engagement, which suggests that they tend to either encourage dialogue or result in no engagement at all, rather than encouraging mostly base-level likes and shares as other media types do.

The precise reasons for this require further study. However, some predictions can be made as to why text posts encourage dialogue at such a relatively high rate. Perhaps the small proportion of text posts (about 8% of all posts) are being written in a more engaging style by councils, thus encouraging dialogue. Officials stated in the questionnaire that one of the improvements they had enacted was to ‘change tone’ in their posts – adopting a more personal and engaging style versus formal and professional. This could be evidence of the success of that. It could also be an anomaly of the research – maybe the government more commonly responds to citizens on *text* posts versus *photo*, *video*, or other posts – thus increasing the proportion of citizen-to-government engagement for text posts.

5.2.1: Recommendations to Councils on Media Type

Councils should continue with their use of *links with photos*, as these engage citizens a great deal more than simply links, and also bring greater dialogue. The benefit is that it is relatively easy to add a photo to a link post, meaning it’s a simple way to increase engagement with little time or effort spent.

Councils should also focus more on the use of *photo* posts on their own, rather than with a link attached – as the data shows citizens find these significantly more engaging. The questionnaire revealed that officials often post about campaigns the council is running – designing custom photos that embed information about the campaigns may be a good way to increase engagement and elicit the dialogue that officials say they are interested in. Along these same lines, councils can also use these custom photos to make the non-engaging content they are required to post potentially more engaging.

Councils should aim to utilise more custom videos as well. Many councils are already beginning to do this, according to the questionnaire. Just as with photos, videos could be especially good for posts about council campaigns, as they are particularly good at eliciting dialogue and citizen feedback. Videos also tend to bring a large amount of engagement, which pushes those posts up in citizen’s newsfeeds and helps to counteract

the negative impact of the Facebook newsfeed algorithm which makes it difficult for council posts to reach citizens on Facebook.

Of course, a downside of videos is the time and cost it takes to produce them. This illustrates the importance of strategic planning by councils, where they carefully select which topics will be best served by the engagement boost of videos, while focusing on quicker and cheaper media types like photos for other topics. It is promising that many officials in the questionnaire put an emphasis on increasing strategic planning of their social media posts, so that councils can improve in their media mix in the future.

5.3: Impact of Topic on Engagement

The data from the content analysis of Facebook posts confirms that topic does have an impact on engagement level and type. Due to limitations on sample size, it's not possible to draw conclusions for all topics. However, *attention to the citizen, citizen protection and security, and marketing/city promotion/tourism* are, roughly, the top three topics as far as engagement level. Hofmann et al. (2013) found that leisure topics seem to attract more engagement; this explain *marketing/city promotion/tourism*, but not the other two topics. In fact, Bonsón et al. (2015) found *citizen protection and security* to be the least engaging topic, rather than among the top. Taken together, this research data and studies by Bonsón et al. (2015), Graham and Avery (2013), and Hofmann et al. (2013) suggest that while topic clearly does have an impact on engagement, there does not appear to be one clear guaranteed top engaging topic.

Looking next at engagement type – in particular looking at which topics encourage more dialogue – *citizen protection and security* remains on top, but *attention to the citizen* and *marketing/city promotion/tourism* do not. Instead, they are replaced by the topic *public works and town planning*. Why does this occur? *Attention to the citizen* posts focus on giving recognition to citizen's accomplishments, such as people winning awards. It makes sense, then, that this topic has such a high proportion of one-way engagement – much of it consists of messages of congratulations.

As for *marketing/city promotion/tourism*, while it still does consist of a fair bit of dialogue, it is far behind *citizen protection and security* and *public works and town planning* in how much dialogue it encourages. Instead, more of the engagement it receives is base-level, consisting of likes and shares. Bonsón et al. (2015) concurs with *public works and town planning* posts encouraging higher-level dialogue engagement, as the topic had one of the top engagement levels in that study.

Considering the lower end of engagement levels, there is greater agreement with Bonsón et al. (2015) – both that study and this one found *health, social services, and education* to bring lower levels of engagement. They are also more likely to receive either base-level or no engagement. As far as the questionnaire goes, officials were correct in *public works and town planning* being engaging, but wrong on *citizen protection and security* – which officials scored as less likely to bring engagement.

5.3.1: Recommendations to Councils on Topic

To reiterate, the results of this study and others indicate that engagement does differ based on topic, but with no promise that there is always a certain topic that's more engaging. More study is needed to pinpoint precise reasons for why this may be. It could be an anomaly, due to differences in topic coding schemes or techniques. However, this is unlikely as Bonsón et al. (2015), Graham and Avery (2013), and Hofmann et al. (2013) all reached very different conclusions as to what topics are engaging. It might also be that topics level of engagement varies by local area, by the demographic of that council's Facebook page, over time according to current events, or a combination of all these reasons.

If so, this illustrates the importance for councils to monitor what topics citizens find engaging. The questionnaire indicated that some councils have already begun to do this. However, there is room to improve, as some of the most commonly topics posted were among the least engaging – such as *social services*, the third most common topic but worst for engagement. It is thus imperative that councils have in place an appropriate statistical way to measure engagement, such as the framework this study used, so they can keep abreast of what topics their local citizens find most engaging. Then they can focus on those topics citizens are interested in, encouraging more dialogue and enabling the higher levels of *open participation* and *open collaboration* from Lee and Kwak's (2012) maturity model.

If the council finds there are less engaging topics they are still required to post about – perhaps *social services*, for instance – they can try to make use of more engaging media types such as *photos* and *videos*, as discussed above. This will help, again, to move towards those higher engagement levels not just in Lee and Kwak's model, but also towards the goal of *political participation* in Dixon's (2010) overall model of e-Government.

5.4: Impact of Intent on Engagement

By far the most used intent by councils was *deliver information*, with nearly 86% of all posts falling under this. This makes it difficult to draw conclusions on what the impact of all the different intents are on engagement, due to insufficient sample sizes in some instances. For instance, there were not enough *request feedback* posts to determine if that brought greater engagement than *deliver information*.

However, it does confirm what many other studies have concluded, that governments continue to use social media mostly as a way to push information out, rather than attempting to crowdsource feedback (Abdelsalam et al., 2013; Hofmann et al., 2013; Ellison and Hardey, 2014; Landsbergen, 2010; Mergel, 2012). The nearly 86% of *deliver information* posts here demonstrate Mergel's (2013) 'representation strategy', where the government simply uses social media as an electronic bulletin board, to disseminate information.

This was echoed in the questionnaire, where 42% of officials said they do not seek feedback through Facebook. Of the 58% who do, *website engagement activity* was the most common method. This mirrors what the data found, with *website engagement activity* the most common post intent after *deliver information*. However, officials split nearly evenly

over whether *website engagement activity* or *request feedback* was the best method, with just under half of respondents selecting *request feedback*. This is interesting as *request feedback* was very rare in the data – with less than 1% of posts explicitly seeking feedback from citizens. Perhaps a number of officials believe that it is the ideal method to use, but for any number of reasons do not frequently use it themselves.

Looking at the data from Phase I, different intents do result in different engagement levels and types. *Offline engagement activity* and *external website engagement activity* both brought significantly lower engagement levels than *deliver information*. Both engagement types posts were more likely than *request feedback* to receive no engagement at all. *Offline engagement activity* posts proved particularly unpopular, as they were less likely to receive any sort of non-base-level engagement (comments were rare, in other words).

Despite the data indicating that these two intents result in lower engagement levels than *request feedback*, it is not possible to come to a complete conclusion on whether the government implicitly limits engagement based on the intent of a post, as proposed by Hand and Ching (2011). The low sample size of *request feedback* posts prevents this. In any case, the vast majority of posts are already just disseminating information, and the data shows that citizens are happy to engage and leave feedback on these *deliver information* posts. It seems that media type and topic have a larger role to play in determining the level and type of engagement a post gets from citizens.

The questionnaire shows that feedback from citizens is certainly being passed on, even though in most cases the government isn't explicitly requesting it. In many cases councils are automatically passing on all feedback to the relevant departments, with a routine monitoring system in place. Other councils are slightly more selective about the feedback they pass on, but are nonetheless still passing on genuine and relevant comments, particularly when they relate to a controversial or popular issue many people have been commenting on.

5.4.1: Recommendations to Councils on Intent

It's important to consider the limitation in this research in that the measurement of engagement is only looking at engagement on the actual Facebook platform. Just because *external website engagement activity* and *offline engagement activity* have low Facebook engagement levels doesn't mean that citizens don't necessarily go to the websites or offline events and engage at a high level there.

In fact, in the questionnaire several officials said that they used Facebook to promote surveys on external websites, and that these promoted surveys received a good response rate. Thus there is evidence that *external website engagement activity* is resulting in engagement with government, just not directly on the Facebook platform.

However, it is important to keep in mind the impact of the Facebook newsfeed algorithm, as discussed by many officials in the questionnaire. This algorithm will keep low engagement posts – such as these posts promoting surveys – from reaching a large audience on Facebook. Thus it is to the council's benefit to increase the Facebook engagement levels on these posts.

This could be done by explicitly asking users to like and share them. Councils should also look at making use of more engaging media types, such as photos and videos, in order to increase their engagement. If the council is able to get more widespread engagement on these survey promotion posts, it can counteract the negative effects of the Facebook newsfeed algorithm and greatly expand the audience – thus increasing the potential response rate to the survey and increasing the citizen feedback the government can ultimately take in. As discussed in the questionnaire, officials can also look in to paying to promote some of these posts, if they deem the money worth spending to increase the post's reach and engagement.

5.5: Council Efforts to Increase Engagement

Government officials managing council Facebook pages are broadly happy with how their councils are engaging with citizens. Nearly 85% ranked their council as performing average or better. Despite this, officials still face a number of barriers which they view as hampering their efforts to increase engagement. Many of these barriers are not new, and have been identified in the literature before in past studies.

One barrier relates to the themes *lack of interest and negativity from citizens* and the subtheme *genuine/controversial feedback*. These themes relate to concerns about a small vocal minority monopolising comments on Facebook posts, making predominately negative remarks that are often political attacks. This is similar to concerns raised by Freeman and Loo (2009), Landsbergen (2010), Lathrop and Ruma (2010), and Picazo-Vela et al. (2012). The worry is that this vocal minority will be wrongly read as representing overall citizen opinion of the government, and is part of the reason why some officials take a dim view of gathering feedback via Facebook believing it is of low quality.

The questionnaire responses indicate that there is not much danger of officials mistaking citizens who are part of this vocal minority as representing general opinion. The officials generally recognise and are familiar with people who commonly post negative feedback. The wider question, as also raised by Landsbergen (2010), is how councils can deal with these negative remarks. As the questionnaire indicated, there are some in government who would prefer to just 'hide' the negative feedback and not address it. The official suggests that is not the best way to increase engagement, though.

Another barrier, as illustrated through the data from Phase I and the questionnaire, is the emphasis by the government on broadcasting content, rather than making efforts to crowdsource feedback. As Mergel (2012) and Ellison and Hardey (2014) found, this is quite common in governments. However, it prevents government from truly reaching the peak of *political participation* on Dixon's (2010) maturity model of e-Government and *open participation/open collaboration* on Lee and Kwak's (2012) social media maturity model.

The questionnaire also recognised that councils need to improve their response to citizen feedback by replying on posts as quickly as possible. Officials discussed how failure to do this makes citizens less likely to want to engage in the future, which is confirmed by Panagiotopoulos et al. (2013).

The questionnaire identified a lack of resources of time, staff, and money among many councils in the UK, particularly in light of current austerity measures and budget cuts. This is not an uncommon issue, as Chen (2002), Graham (2014), and Landsbergen (2010) identified. Perhaps this is part of the reason local governments do not engage with citizens as well as national governments, because they have a lack of resources that they have little power to do anything about (Ellison and Hardey, 2013). This is a particular concern for Facebook, considering the necessity of paying to promote posts in order to increase their reach – especially when, as one official said, less than 1% of users living in the council followed the Facebook page.

Risk aversion, as discussed by Chang and Kannan (2008) is an issue as well in some councils. A restriction on who can access social media prevents wider engagement from occurring through all levels of the council. Restrictions on the hours they can use Facebook further damage engagement potential, as the questionnaire indicated the peak time for engagement is outside of traditional office hours.

The structure of government appeared as a theme in the questionnaire responses. But it was not one of hierarchical issues, as Chang and Kannan (2008), Chen (2002), and Mergel (2012) identify. Rather it related to horizontal communication silos, with difficulty in passing off and keeping track of citizen communication from department to department. There does seem to be some potential in social media management tools helping to improve this and break down the silos within councils.

5.5.1: Recommendations to Councils on Improving Engagement

Councils need to start off by adopting strategic plans for how they want to manage their social media communication, if they haven't already. At the heart of that plan should be an emphasis on how the council plans to drive engagement, keeping in mind the recommendations made above regarding media type, topic, and intent. The plan should also contain a policy for how to address negative posts in a satisfactory way, which should not be simply ignoring them – evidence shows that will only discourage future engagement.

Councils also need to put more emphasis on engaging users directly, actively trying to crowdsource feedback rather than collecting it as an afterthought. To encourage dialogue, the council needs to ensure there is a speedy response to citizen's feedback. The issue of lack of resources is not an easy one to manage, particularly as councils have little control over what funding they receive from central government. But it means they must be smarter with the resources they have. They should establish a system to monitor what content receives the best engagement and use that to help determine where resources should be allocated to help improve overall engagement.

The questionnaire indicated that risk aversion is not as much of an issue as it once was. However, councils that still are very risk averse to innovating and engaging with social media need to work on reducing that risk aversion, by looking at many of the examples of councils successfully using social media to engage with the public. Finally, horizontal communication silos between departments in councils need to be broken down, so that all parts of the council can engage with citizens and allow for a seamless experience. The

questionnaire results are promising, indicating that many councils are working on doing just that.

5.6: Validity, Scope, and Generalisability

Data was collected from local authorities across all regions of the UK. This also involved a mix of rural, suburban, and urban councils. As such, it is safe to generalise the data and recommendations across the whole of the UK. Larger councils were selected rather than smaller councils, which might impact the generalizability of the results to smaller UK councils. However, there is no reason to believe that smaller councils face radically different circumstances from larger councils that impact the generalisability of the results in any major way.

The results looking at the impact of intent, media type, and topic on engagement level and type can likely be generalised to some extent to local authorities in other western countries similar to the UK. Caution should be exercised here, however, as previous research by Bonsón et al. (2015) indicates that there are differences between countries and government styles in engagement with citizens. The questionnaire results are likely only applicable to the UK. Outside the UK their implications should be treated with caution and in an anecdotal fashion. The study was limited to local authorities. Although parallels may be drawn to social media use by central government, the results are not necessarily generalisable.

The validity of all results are assured, as a robust framework of statistical analysis was used to analyse the data from the content analysis in Phase I. It was not possible to reach conclusions in some cases due to insufficient sample sizes, but those cases were excluded from the final data set in order to ensure the validity of the results. A robust framework combining statistical analysis with qualitative thematic analysis was also used in Phase II, ensuring the questionnaire results validity as well.

Chapter 6: Evaluation, Reflections, and Conclusions

This chapter evaluates and reflects on the project as a whole, also looking at limitations and future research. It is organised as follows:

- 6.1: Evaluation of Project Plan
- 6.2: Evaluation of Literature Review
- 6.3: Evaluation of Methods
- 6.4: Evaluation of Data Collection and Analysis
- 6.5: Evaluation of Objectives and Summary of Conclusions
- 6.6: Significance of Research
- 6.7: Limitations of Research
- 6.8: Future Research
- 6.9: Reflections

6.1: Evaluation of Project Plan

The overall flow of the project as established in the initial planning stage worked well. However, there were some differences in the precise timeline. Some activities took less time than anticipated, such as preparing the coding schemes and the creation of the questionnaire. Other activities took longer than anticipated. For instance, the analysis of data for the results was slightly delayed as the researcher was not familiar with all the necessary statistical tests. There was extra time built into the schedule, though, and that combined with the time saved from the activities completed early meant the overall project went ahead fairly close to plan.

6.2: Evaluation of Literature Review

The literature review consisted of a multi-disciplinary search covering a number of topics. It began with the foundations of both social media and e-Government. It then moved on to explore the intersections of those two fields, examining the benefits of social media use by the government – in particular by local government in the UK. The key benefit of engagement was focused on, with the literature then shifting to consider what factors local governments could manipulate to impact the engagement level and also the different types of engagement that could result (media type, topic, and intent). This is where a large gap in the literature was identified, as very little research had considered how local governments could increase their engagement on social media by modifying different attributes of their posts.

6.3: Evaluation of Methods

The set-up of the project in two phases – utilising quantitative content analysis in the first phase and mainly qualitative thematic analysis in the second phase – was very effective. Not only did it allow for each phase to address its respective research questions and objectives, but it also meant that qualitative data gathered through the thematic analysis was able to give greater insight into the environment councils were working in on Facebook. This facilitated the development of explanations of why some of the quantitative data was the way it was, and also helped to develop relevant recommendations to councils. It also allowed for some data triangulation, in the areas where government official's opinions agreed with the quantitative data. Conversely, it allowed discovering where official's opinions on what was engaging deviated from what the quantitative data said as well.

However, given the chance to conduct the project again, probability sampling across the UK might have been a better fit for selecting which local authorities for the Phase I content analysis of posts. This would have improved the generalisability of the findings with its random sample, rather than focusing on the largest local authorities in each UK region, as this project did.

6.4: Evaluation of Data Collection and Analysis

The content analysis of Facebook posts in Phase I went smoothly, through the use of a codebook. However, if it could be done again it would be better with at least one additional coder, so that they can crosscheck their results with each other and help reduce researcher bias. It would also have been beneficial, if more time and resources were to have been available, to collect a greater sample size of posts than the 1,800 that were coded. This could have then avoided the issue of insufficient sample sizes for some topics and intents to conduct a full analysis on which are most engaging.

To help in collecting and coding a greater number of posts, it would be useful to look into using the Facebook programming API to automate the process of pulling posts and comments from Facebook. This way coding could be done much faster, with less manual work.

The questionnaire in Phase II received 26 replies, which provided enough detail to draw some key conclusions. But the research could have been improved by increasing the response rate, perhaps by making an effort to reach out to a greater number of councils. It would also have been advantageous to conduct some interviews with government officials, in addition to the questionnaire. Although the questionnaire provided good data, interviews provide the opportunity to ask follow-up questions.

6.5: Evaluation of Objectives and Summary of Conclusions

Through the two phases of the research, all of the following four objectives were addressed. The fifth objective, development of best practice recommendations for councils, was fulfilled as part of these four objectives.

6.5.1: Discover what impact different *media types* (e.g. photos, videos, links, text) in posts has on engagement level and type

The research confirmed that rich multimedia types such as photos and videos bring greater engagement levels. They also encourage greater dialogue types of engagement. This represents a fantastic opportunity for councils to increase their engagement levels by creating more photos and videos with information about various topics and campaigns they wish to inform the public about.

6.5.2: Discover what impact different topics (e.g. housing, transport, education) in posts has on engagement level and type

The research found that different topics do have different engagement levels, but that what topic is most engaging can vary – there is not necessarily one topic that is always the most engaging. This demonstrates the importance that councils monitor what topics engage citizens on social media, so that they focus on those topics. If there are less

engaging topics councils need to post about they can also make use of more engaging media types such as videos to try to increase engagement.

6.5.3: To discover what impact the intent (e.g. deliver information, request comments, encourage offline engagement) of posts has on engagement level and type

The research found that different intents result in different engagement levels, with posts promoting surveys or community meetings seeking citizen feedback receiving far less engagement than posts simply disseminating information. This represents an opportunity for councils, as if they can combine, for instance, posts promoting surveys with engaging media types such as photos or videos they could potentially increase the reach of the survey and get a far higher response rate than they otherwise would.

6.5.4: To explore how government officials managing social media attempt to encourage engagement with citizens and how well they feel they are doing so

Data from the questionnaire suggests that officials are happy with how their councils are engaging, with the vast majority ranking their council engagement at average or above. Several barriers to engagement exist still, however. Councils face lack of interest from citizens, negative feedback, a lack of resources such as time, staff, and money, and internal communication difficulties due to silos, among other barriers. Officials have tried to work past these barriers by developing strategic plans, encouraging speedy responses, and adopting social media management tools, among other methods.

6.6: Significance of Research

This research is significant as there is very little research looking at how governments can encourage engagement on social media at the local government level. This study also provides an in-depth focus on the UK, compared to other studies which have examined local governments from a European-wide perspective. The research is novel in considering the idea of the *intent* of a government's social media post, and how that impacts engagement. It is also novel in adopting a differentiation between different types of engagement when considering what attributes of posts impact engagement. The inclusion of a questionnaire to provide greater context is another benefit.

6.7: Limitations of Research

This project involved content analysis of a fairly small sample size of 1,800 Facebook posts. This limited the research as insufficient samples for some topic and intent categories meant that conclusions could not be reached to determine how engaging all topics and intents were. The small sample sizes in each category also prevented multi-level analysis, examining if different topics have different media types that engage better. For example, perhaps health posts with videos bring greater engagement, while education posts bring greater engagement using photos.

The posts in Phase I were coded by one researcher, which leaves open the possibility for some bias and inconsistency in the codings since no cross-checks could be carried out. The research also used a non-probability sampling method to select local authorities for content analysis of posts in Phase I. The use of questionnaires to collect data from government officials, rather than interviews, limited the ability to ask follow-up questions and prompt richer more in-depth answers.

6.8: Future Research

Local government use of social media remains an emerging field of research, with a great deal of research available. Future studies able to access a larger sample size of posts than this one might seek to determine if different combinations of media types and topics result in different levels and types of engagement. Another interesting perspective would be to consider the additional attribute of citizen feedback being of either a *positive* or *negative* sentiment, and exploring how that relates to levels and types of engagement. For instance, does negative feedback effect the level and type of engagement on a post?

There also remains scope to consider additional attributes of posts and how they impact the level and type of engagement. Recall that text posts surprisingly had a high proportion of dialogue engagement. Future studies could consider the tone or style of posts, seeking to determine what it is that drives some text posts to encourage a dialogue.

This research has illustrated the importance of councils monitoring what topics create engagement, so that they can inform their own social media strategy. Future studies could examine the different ways local governments monitor and measure engagement, to determine if one monitoring method is superior to another.

6.9: Reflections

This project provided ample opportunity for me to expand my knowledge and experience. It helped me to further hone my project management skills, by giving me the opportunity to manage a large multi-phase project over a period of several months. Part of this included learning how to time all the various stages of the project (e.g. when to collect the data and distribute the surveys) so that it could flow smoothly from stage to stage without downtime.

It has also given me the opportunity to learn a great deal about data analysis – in regards both to the statistical tests that should be run on quantitative data and the proper procedures for conducting qualitative content analysis. I did not have much experience with either analysis method, but I considered statistics in particular to be one of my weaknesses. However, this project forced me to throw myself into learning the proper statistical tests to run to ensure my results were valid, which I am grateful for. Using SPSS for this presented a bit of a learning curve, but in the end I mastered it.

Performing the statistical tests myself has helped me better understand the results I read in other literature as well, now knowing what the purpose of many of the tests they run are. If I could start the project over, however, I would have spent more time preparing myself for the statistical tests I would need and learning how to do them and interpret them. Although I was quite able to learn on the go, a lot of stress would have been alleviated if I had prepared better before commencing work.

The most challenging part of the write-up of this project proved to be paring down all the content I had gathered up over the past several months to write a succinct report. As I had done so much research and gathered such a great deal of data, I prepared outlines for the write-ups of the section that contained far too much detail. After writing several of these bloated sections I had to go through and condense them down to be far more succinct

with just the right amount of detail. If I could start the project over again, I would put more focus on planning from the start how much content can be included in each section of the write-up to have the right level of detail. That way I could have avoided wasting time doing write-ups of content that I would later have to remove from the dissertation.

This project has been a fantastic opportunity both to expand my knowledge of a topic I'm keenly interested in and give me experience in conducting academic research. I enjoyed being able to explore the e-Government movement and use of social media by local governments in detail. I also enjoyed the chance to build many valuable analytical research skills which are sure to come in handy as I work towards the future.

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Appendix A: Proposal

Introduction

Background

The use of social media by individuals is becoming ubiquitous, both in the UK and around the world (Office for National Statistics, 2013). Perhaps reflecting this in part, the presence of governments on social media has also become extremely commonplace (Bonsón et al., 2015). This social media presence brings with it benefits, as previous research has indicated that local government's use of social media has the capacity to increase citizen engagement (Ellison and Hardey, 2013).

However, what is less clear is *what* it is about local government's use of social media that encourages engagement – in other words, how can local governments tailor their use of social media to encourage engagement from citizens? Bonsón et al. (2015) have performed some limited empirical examination of this, looking at what impact *media type* (e.g. photos, videos, text) and *topic* (e.g. housing, transport) have on engagement. There remains scope here to consider other factors, as well.

One such factor is discussed by Hand and Ching (2011) – can governments implicitly limit the level of engagement they get based on the *purported purpose* of a post? In other words, does a post that simply provides information provoke the same level of engagement as a post that invites comments or a post that invites citizens to provide their feedback in another manner offline? This *purported purpose* of a post is an interesting factor to consider, alongside *media type* and *topic*.

When considering how these various factors impact engagement among citizens, an important point to consider is the different forms of engagement and whether these factors promote certain forms of engagement over others. For instance, is the engagement simply *base-level* (perhaps by liking a post on Facebook), is it *one-way* (a citizen posting with no government response), is it a *dialogue between citizens and government*, or is it a *dialogue between citizens*? The research done thus far has not empirically considered these different types of engagement alongside the attributes of government's posts (e.g. *media type*, *topic*, *purported purpose*); this is a useful and intriguing addition.

Research Question

With these gaps in the research in mind, this study will endeavour to answer this research question: *How does social media content posted by local government encourage engagement with citizens?*

To address this research question, the following Aim and Objectives have been adopted.

Aim

To discover what impact various attributes of social media posts by local governments have on encouraging differing forms of engagement with citizens.

Objectives

- To discover what impact different *media types* (e.g. photos, videos, links, text) in posts has on engagement
- To discover what impact different *topics* (e.g. housing, transport, education) in posts has on engagement
- To discover what impact the *purported purpose* (e.g. deliver information, request comments, encourage offline engagement) of posts has on engagement
- To consider which forms of engagement are more common for social media posts with specific attributes (i.e. media type, topic, purported purpose)
- To explore how government officials managing social media attempt to encourage engagement with citizens and how well they feel they are doing so
- To develop best practice recommendations for local government in encouraging engagement with citizens

Scope

Limited time and resources do not permit local governments outside the United Kingdom to be studied – thus, care will need to be taken when generalising the results to other countries. Not all local authorities in the UK can be examined, either, although this study will endeavour to examine a representative sample across the UK.

In addition, although care will be taken to select a representative sample of UK local authorities to send questionnaires to, there is a chance that replies received will not be representative of the whole UK. There may be some bias in the responses as far as local authority size and location.

As there is only one researcher, content analysis and coding of social media posts cannot be crosschecked and verified by others. This does leave the potential of bias in the results, although the researcher plans to make use of analysis frameworks that have been used and verified in previous studies to reduce this risk.

This research also examines only Facebook posts by government, rather than incorporating other platforms such as Twitter. While the author believes this to be an appropriate choice, since Facebook has the largest number of UK users of any social media platform, it may nevertheless impact the result's generalizability (Ofcom, 2014).

Outputs & Beneficiaries

The research will culminate in a written project report. This report will document the entire research process, including the findings from the research and their implications. The report will also contain a set of recommendations for local governments in how best to utilise social media to encourage engagement with citizens.

The research is likely to be of particular benefit to officials working in local government, as they can make use of the best practice recommendations to tailor their use of social media to better engage with citizens. Current research has so far indicated that there is a great deal of room for improvement in how local government's utilise social media; this will help guide officials in making some of those improvements. In addition, while the research is focused on local governments, there is a possibility that some of its findings may be useful to other levels of government as well.

The research in local government's use of social media for citizen engagement is currently fairly limited – robust empirical research in particular. This means it will also be of benefit to other researchers in e-Government, who can utilise it to build off its findings and expand

its scope for future research. Other studies that this research is based off of have had an international focus – this project’s focus on the UK will be able to provide a useful in-depth focus on the UK, rather than just analysing a few local authorities in the UK.

Critical Context

e-Government (electronic government) aims to utilise technology – the Internet in particular – to deliver government services and administration that once would have been delivered in a more traditional paper-based fashion (Dixon, 2010). Moon (2002) and Dixon (2010) argue that the evolution of e-Government can be divided into five broad stages. *Figure 1* illustrates these five stages, as originally laid out by Moon (2002) and adapted by Dixon (2010).

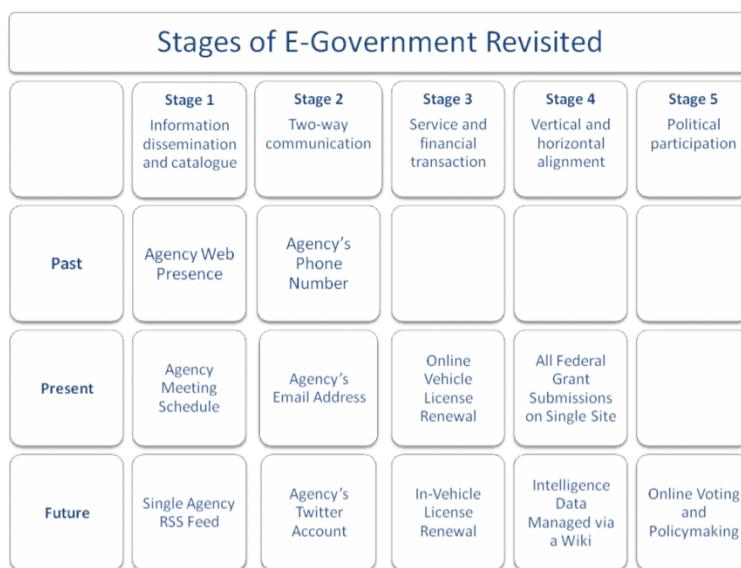


Figure 1 – Stages of e-Government, reproduced from Dixon (2010)

The evolution of the stages roughly parallels the evolution from Web 1.0 to Web 2.0. Stage 1 begins with simply reproducing already existing information in an electronic form as an ‘electronic bulletin board’ – very much what Web 1.0 was about. Stage 2 begins to move towards Web 2.0, by involving two-way communication. Stage 3 and Stage 4 then continue this by further utilising Web 2.0 technologies to facilitate back-and-forth interactions with users.

Stage 5 in the evolution of e-Government, then, is where there is a real opportunity to have an enormous impact on how the public engages with government in general (Sinclair and Le, 2007). One of the Web 2.0 tools best served to make an impact here is social media. Linders (2012) discusses how social media can help move e-Government from representing the ‘citizen as customer’ to representing the ‘citizen as partner’. In other words, citizens can begin to have a more participatory and interactive relationship with government – they can become more engaged – as indicated in Stage 5 of *Figure 1*.

Mergel (2012) finds that government is indeed utilising social media tactics to engage with citizens, by interacting with citizens to try to elicit their comments and opinions. Linders (2012) builds on this, finding that government uses a wide array of tactics to engage with citizens, including supplying information openly online, allowing citizens to provide online feedback on government services, and attempting to crowd-source resolutions to problems from citizens. A notable observation here is that there is not simply one form of engagement with citizens, but a number of different ones. This is an area where future

Appendix A: Proposal

studies examining the connection between government's social media use and citizen's engagement would do well to keep in mind, by considering the various types of engagement that can result.

The presence of governments on social media sites is very high (Bonsón et al., 2015). This high adoption rate of social media by government likely reflects, alongside the potential benefits they hope to gain from it, the growing ubiquity of social media use among the general population (Office for National Statistics, 2013) (Mergel, 2012).

Research has shown that the adoption of social media tools is high among all levels of government, but suggests that local governments might be less effective users of social media (Ellison and Hardey, 2013). This makes them an interesting perspective in which to study social media and engagement with citizens. Local governments often have greater amounts of citizens participating directly than at the national level. At the same time, they operate at a smaller scale, which makes those greater amounts of participants easier and simpler to handle (Mossberger et al., 2013). The local government level also provides interesting possibilities to explore engagement relating to local political issues and the state of local council services (Ellison and Hardey, 2013), which can evoke exceptionally passionate views in some citizens.

Research has found that social media use by local government does have the capacity to increase citizen engagement (Hand and Ching, 2011) (Ellison and Hardey, 2013). What still remains to be explored in detail is *what* it is about local government's use of social media that encourages engagement (Mossberger et al., 2013). Bonsón et al. (2015) have performed some limited examination of this, looking at what impact *media type* (e.g. photos, videos, text) and *topic* (e.g. housing, transport) have on engagement in fifteen EU countries. They choose to measure engagement by means of Facebook activity, utilising a framework adapted by one of the authors. There remains scope to consider other factors apart from *media type* and *topic*, as well.

For instance, Hand and Ching (2011) discuss whether governments implicitly limit the level of engagement they get based on the *purported purpose* of a post. In other words, does a post that simply provides information provoke the same level of engagement as a post that invites comments or a post that invites citizens to provide their feedback in another manner offline? This *purported purpose* of a post is an interesting factor to consider, alongside *media type* and *topic*.

Another question to ask is what difference the local situation in various countries has on social media and engagement – whether this be a difference in government type, cultural values, political history, or otherwise. Ellison and Hardey (2013) predict that this may very well be the case in the UK, where 'viewed historically, central government... has had an ambivalent attitude to citizen participation and local democracy.'

Bonsón et al. (2015) find that there does appear to be some differences in engagement between countries. How certain these findings are, though, is tempered by the limitations of the study. By studying five large local governments in fifteen European countries the study achieved significant breadth, but limited depth. The specific local governments they chose may not be representative of their countries as a whole. More research needs to be done in this area.

To conclude, it is clear that the rise of social media in general society has made its way into government as well. The research thus far appears to point towards social media's benefits as far as engagement with citizens goes. More empirical work needs to be done to confirm exactly what it is about government's use of social media that encourages citizen

engagement, along with how different actions from government on social media can encourage different types of engagement.

Approaches: Methods & Tools for Analysis & Evaluation

General Approach

First Phase

In order to address the research question, aim, and objectives, this project will be split into two phases. The first phase will expand upon the study by Bonsón et al. (2015). It will seek to examine the impact that the *purported purpose* of social media posts has on engagement with citizens, alongside the impact of *media type* and *topic*. It will also consider what *type of engagement* each social media post encourages.

This will involve the content analysis of Facebook social media posts made by UK local authorities. A coding scheme will be derived (discussed in more detail in *Analysis* below) to encode each of the attributes of the social media post: *media type*, *topic*, *purported purpose*, and *type of engagement*. Facebook is an ideal platform to use for this analysis, as it has the largest base of UK users of social media platform – this presents more opportunities for engagement to occur (Ofcom, 2014).

Another benefit of using Facebook is that a framework to measure engagement already exists, as created by Bonsón and Ratkai (2013). Using this method, the engagement score for posts will be calculated. This is discussed in more detail in the *Analysis* below.

Second Phase

The second phase will involve a questionnaire sent to officials with responsibility for social media in local authorities in the UK. This questionnaire will seek to explore what steps officials managing social media take to encourage engagement with citizens, along with the rationales behind those steps. It will also seek to gauge how well officials think they are doing with engaging citizens utilising social media. Questions to help further explore data gathered from the first phase of the project may also be included.

Data Collection

The data in the first phase will be collected from the Facebook accounts of local authorities in the UK. Bonsón et al. (2015) selected the five largest local authorities in each country to examine. As this study is limited to the UK, the NUTS Level 1 (NUTS-1) regional classifications will be utilised, rather than countries (Office for National Statistics, 2012). To ensure a balanced representation across the UK, the three largest local authorities in each of the twelve NUTS-1 classifications will be selected.

The Facebook page for the local authority will then be located by first checking the local authority's official webpage for a link. If a link cannot be located, a Google search will be attempted with the local authorities name, plus the keyword 'Facebook'. If a Facebook page still cannot be located, the next largest local authority for the NUTS-1 region will be used instead. Fifty posts from each of the selected local authority's Facebook page will then be collected, along with any attached comments, the number of 'likes', and the number of 'shares'.

The data for the second phase will consist of returned questionnaires from local authority officials.

Analysis

First Phase

Content Analysis & Coding

A content analysis of the collected social media posts will be performed. This will be done with the use of a coding scheme to encode each of the post's attributes: *media type*, *topic*, and *purported purpose*. Bonsón et al. (2015) has developed a coding scheme for *media type* that categorises a post as using a: *video*, *link*, *photo*, *text*, or *other*. It is likely that this will be utilised for this project.

Bonsón et al. (2015) also have developed a coding scheme for *topic*, some examples of which include: *environment*, *social services*, *health*, *education*, and *housing*. This research may choose to adopt this same scheme, as it brings the advantage of facilitating easy comparison between the studies. However, a further search of the literature will be conducted before making a final decision.

The coding scheme for *purported purpose* will be created after a further literature search. Based on Hand and Ching (2011), a possible (not inclusive) coding scheme might include some of the elements in *Figure 2*.

Purported Purpose	Definition
Deliver information	Using social media post as an electronic bulletin board
Requesting feedback	Actively eliciting comments on the social media post
Offline engagement activity	Promoting an event occurring offline that involves engagement with government (e.g. a community meeting about the future of the libraries)
External site engagement activity	Promoting an event which involves engagement with government and occurs online but not on the social media platform (e.g. a feedback survey hosted on a council site)

Figure 2 – Potential Purported Purpose Coding Scheme

The 'likes', 'shares', and comments of the posts will then be analysed using a coding scheme, in order to assign the *type of engagement*. A further literature search is needed before finalising a coding scheme. Bonsón et al. (2014) discuss the distinction between local government encouraging one-way dissemination of information *versus* a two-way exchange *versus* discussion and dialogue. *Figure 3* shows a potential coding scheme based from this.

Type of engagement	Definition
Base-level	Only 'likes' and/or 'shares'
One-way	Citizen leaves a comment, but with no reply
Citizen-to-government dialogue	Citizen leaves a comment, which is responded to by the government
Citizen-to-citizen dialogue	Citizen leaves a comment, which is responded to by other citizens

Figure 3 – Potential Type of Engagement Coding Scheme

Quantitative Analysis

Once the content analysis and coding of posts is complete, a full set of quantitative figures can be put together. This will enable addressing the research objectives to discover if a specific (or some combination thereof) *media type*, *topic*, or *purported purpose* encourages more engagement than others. Engagement will be calculated using the framework for Facebook established by Bonsón and Ratkai (2013) and reproduced in *Figure 4*. Engagement is calculated by adding together *P3*, *C3*, and *V3* from *Figure 4*.

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Name	Sign	Formula	Measures
Popularity	P1	Number of posts with likes/total posts	Percentage of the total posts that have been liked
	P2	Total likes/total number of posts	Average number of likes per post
	P3	(P2/number of fans)*1,000	Popularity of messages among fans
Commitment	C1	Number of posts with comments/total posts	Percentage of the total posts that have been commented on
	C2	Total comments/total posts	Average number of comments per post
	C3	(C2/number of fans)*1,000	Commitment of fans
Virality	V1	Number of posts with shares/total posts	Percentage of the total posts that have been shared
	V2	Total shares/total posts	Average number of shares per post
	V3	(V2/number of fans)*1,000	Virality of messages among fans

Figure 4 – Engagement Calculation, reproduced from Bonsón and Ratkai (2013)

A quantitative analysis will also be performed to determine if a specific (or some combination thereof) *media type*, *topic*, or *purported purpose* encourages more of a certain engagement type (as set by *Figure 3*).

Second Phase

A coding scheme will be devised for the questionnaire, in order to allow an analysis of the responses. This will involve content analysis for any open-ended questions that are included. The answers will help to inform the findings from the first phase. Combined together, the two phases will feed directly into the set of best practice recommendations for local governments to best encourage engagement with citizens.

Ethical, Professional, & Legal Issues

In the first phase of this project, I will be analysing posts authored by local authorities on their public Facebook pages. As part of this, I will be looking at the comments left and the number of ‘likes’ and ‘shares’. However, I will not at any point be using or storing any personal data – I will only be storing the attributes of the post according to the appropriate coding scheme. As such, there are no ethical concerns.

The second phase of the project involves a questionnaire, which will be completed by officials in local government who are responsible for managing social media accounts. I have completed the *Ethics Checklist*, including *Appendix B*, and attached them to this document. I confirm that anyone answering the questionnaire will give informed consent, via a consent form that will be submitted for ethical approval through the normal process. Any private data I collect will remain confidential, and their responses will remain anonymous in any findings I publish. I will make it clear that they are under no obligation to answer any question they feel uncomfortable with.

Risk Register

No	Risk	Response (<i>to mitigate</i>)	Contingency Plan (<i>if risk occurs</i>)	Likelihood (<i>out of 5</i>)	Impact (<i>out of 5</i>)	Ranking (L*I)
1	Do not receive sufficient questionnaire replies from local authorities	Reach out to local authorities in a number of different ways – phone, email, and social media – to maximise chance of a reply	Contact additional local authorities ahead of time to use as backups as needed	4	5	20
2	Become overwhelmed by large amount of Facebook posts and metadata to store & store in incorrect fashion	Draft out a plan before beginning to collect data on how the data will be systematically stored in a logical fashion; Make backups of data storage	Restore the most up-to-date backup and create work plan to recollect lost data	3	3	9
3	Facebook post data stored in a manner which makes it very difficult or impossible to perform the necessary calculations to analyse	When drafting out data storage plan do a pilot test with fake data to ensure necessary calculations can be done easily	Create a plan to migrate the data as necessary so the analysis can proceed	3	4	12
4	Lose data or work on dissertation	Store everything in the cloud; Make regular local backups	Restore the most up-to-date backup and create work plan to redo lost work	1	1	1
5	Collection or analysis of data takes longer than is available to complete dissertation	Perform benchmark tests before starting dissertation to determine how long it takes to collect and analyse a set amount of data; Adjust dissertation plan/scope as necessary	Scale back the scope of the data collection/analysis as necessary to meet the deadline (e.g. drop some local authorities or the number of posts analysed)	3	5	15
6	Questionnaire data does not adequately address research question	Pilot the questionnaire before use	Modify questionnaire, if there is still sufficient time	2	5	10

Figure 5 – Risk Register

Plan of Work

GANTT CHART

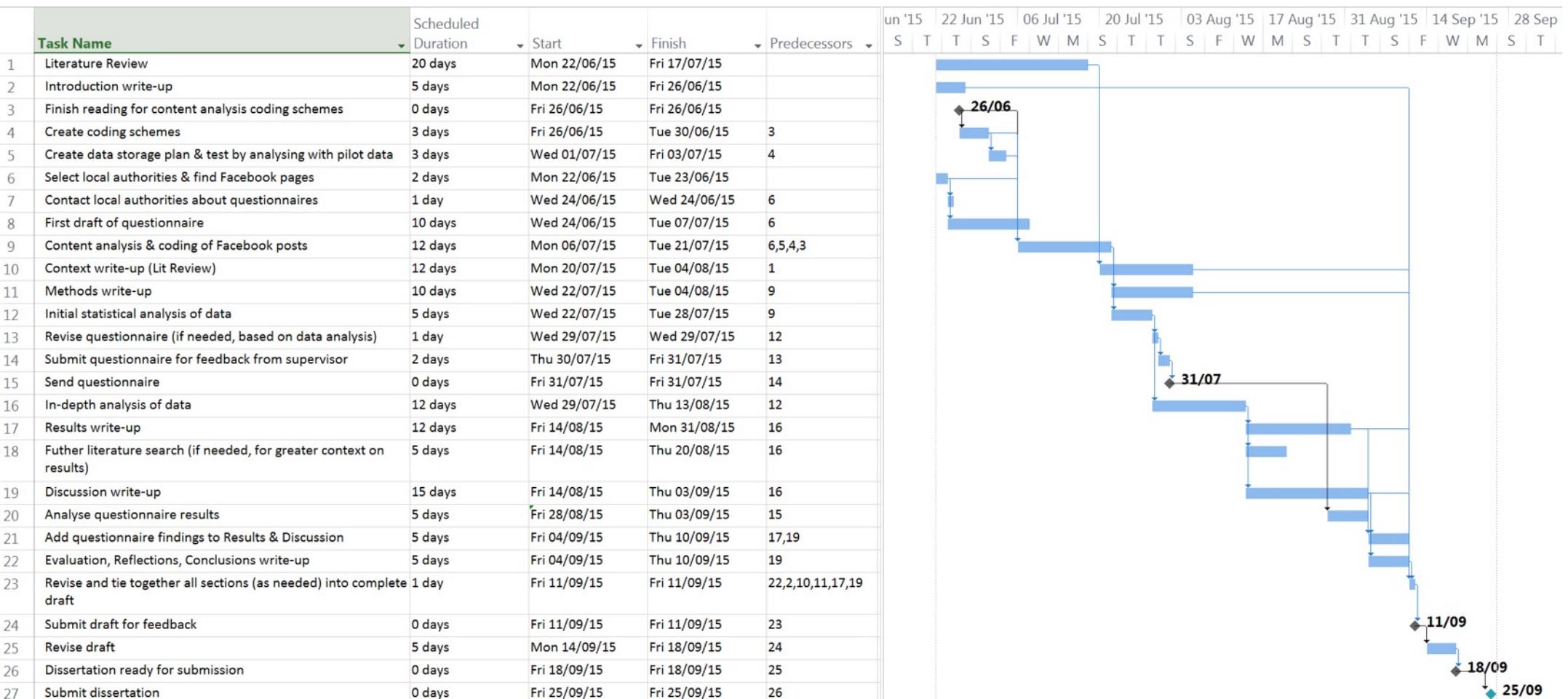


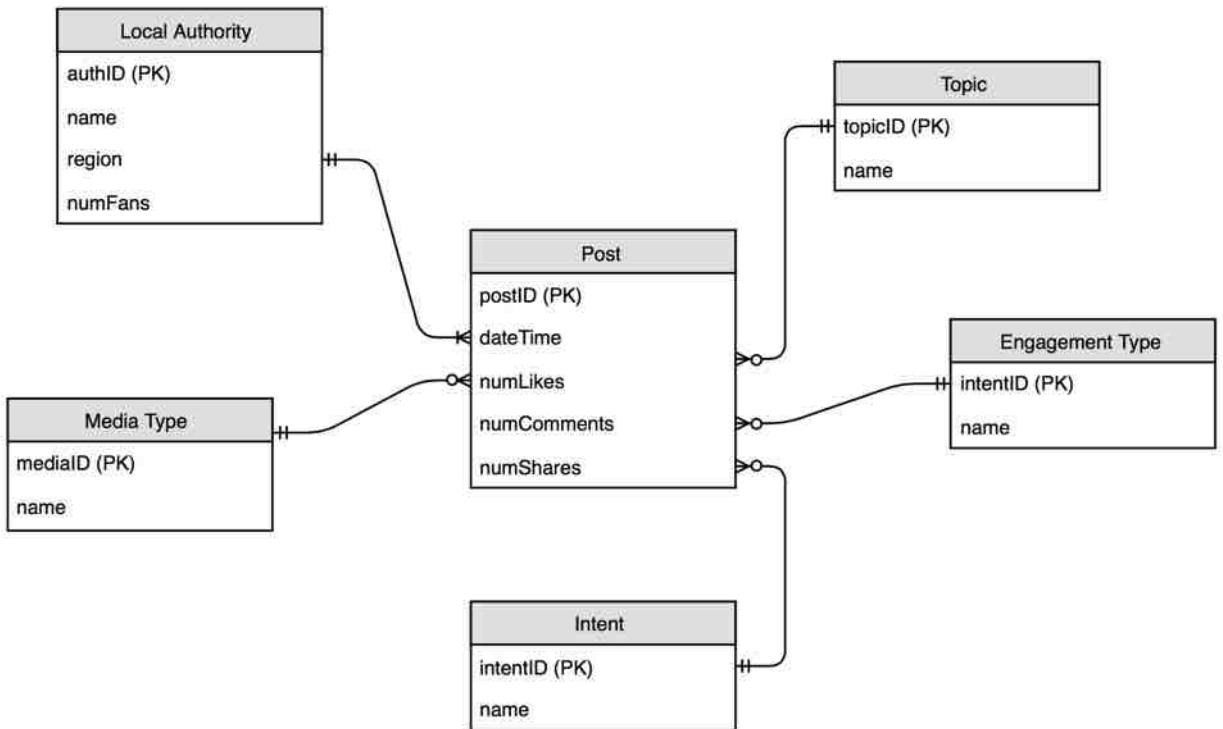
Figure 6 – Gantt Chart

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Appendix B: Phase I Database Design Documents

Entity-relationship diagram



Relational Model

Post (postID, dateTime, numLikes, numComments, numShares, authID, mediaID, topicID, intentID, typeID)

FOREIGN KEY authID REFERENCES LocalAuth(authID)

FOREIGN KEY mediaID REFERENCES MediaType(mediaID)

FOREIGN KEY topicID REFERENCES Topic(topicID)

FOREIGN KEY intentID REFERENCES Intent(intentID)

FOREIGN KEY typeID REFERENCES EnType(typeID)

EnType (typeID, name)

Intent (intentID, name)

LocalAuth (authID, name, region, numFans)

MediaType (mediaID, name)

Topic (topicID, name)

SQL Query

The data was extracted from the database for analysis in SPSS using the following SQL query, which gathered all relevant attributes and also calculated the engagement score:

```
SELECT MediaType.name AS mediaType, Topic.name AS topicName, Intent.name  
AS intentName,  
((Post.numLikes/localAuth.numFans)*1000)+((Post.numComments/localAuth.num  
Fans)*1000)+((Post.numShares/localAuth.numFans)*1000) AS enScore,  
EnType.name AS enType, (Post.numLikes/localAuth.numFans)*1000 AS  
popScore_Likes, (Post.numComments/localAuth.numFans)*1000 AS  
comScore_Comments, (Post.numShares/localAuth.numFans)*1000 AS  
virScore_Shares  
FROM Post, LocalAuth, MediaType, EnType, Topic, Intent  
WHERE Post.authID=LocalAuth.authID AND Post.mediaID=mediaType.mediaID  
AND Post.typeID=EnType.typeID AND Post.topicID=Topic.topicID AND  
Post.intentID=Intent.intentID  
ORDER BY post.mediaID, post.topicID, post.intentID, post.typeID;
```

Appendix C: Local Authorities Selected for Phase I

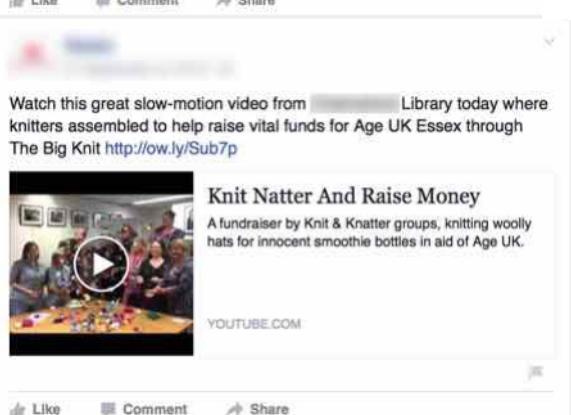
NUTS-1 REGION	LOCAL AUTHORITIES
NORTH EAST ENGLAND	Durham County Council Newcastle City Council Sunderland City Council
NORTH WEST ENGLAND	Lancashire County Council Manchester City Council Cumbria County Council
YORKSHIRE AND THE HUMBER	Leeds City Council North Yorkshire County Council Bradford Metropolitan District Council
EAST MIDLANDS	Nottinghamshire County Council Derbyshire County Council Lincolnshire County Council
WEST MIDLANDS	Birmingham City Council Staffordshire County Council Worcestershire County Council
EAST OF ENGLAND	Essex County Council Hertfordshire County Council Norfolk County Council
GREATER LONDON	Croydon Council Newham Council Enfield Council
SOUTH EAST ENGLAND	West Sussex County Council Oxfordshire County Council East Sussex County Council
SOUTH WEST ENGLAND	Devon County Council Gloucestershire County Council Cornwall Council
WALES	Cardiff Council Swansea Council Rhondda Cynon Taf Council
SCOTLAND	Glasgow City Council City of Edinburgh Council Fife Council
NORTHERN IRELAND	Belfast City Council Armagh City, Banbridge & Craigavon Borough Council Newry, Mourne and Down District Council

Appendix D: Phase I Codebook

Media Type

The *media type* of the post is determined by examining what multimedia content the post contains and coding it as per the table below.

ID	MEDIA TYPE	DESCRIPTION	EXAMPLE
1	Video	Post contains an attached video. No link is included in the post.	 <p>The Toon Cycling in the City tour takes in our lovely Heaton Park</p>  <p>175 Views</p> <p>Like Comment Share</p> <p>2 people like this.</p>
2	Link	Post contains a link to an external web page or another Facebook page.	 <p>Want to save money on your energy bills? Sign up to the #BigCommunitySwitch launched today http://ow.ly/RW5cq</p> <p>Scheme launched to save money on energy bills City Council</p> <p>Local people are getting the chance to reduce their energy bills through signing up to the Big Community Switch.</p> <p>GOV.UK</p> <p>Like Comment Share</p>
3	Photo	Post contains an attached photo. No link is included in the post.	 <p>The Stoptober roadshow is coming to Northumberland Street on Wednesday 16th September in [REDACTED] to encourage smokers to sign up for the month long campaign and give up for good.</p> <p>Stoptober, Public Health England's 28 day stop smoking event, is back on 1st October following its success last year in helping over 260,000 people in their quit attempt. Evidence shows that if a smoker can go 28 days without a cigarette, they are five times more likely to stay permanently smokefree.</p>  <p>Like Comment Share</p>

ID	MEDIA TYPE	DESCRIPTION	EXAMPLE
4	Text	Post contains only text and no other media type.	 <p>We've had to close Heacham Recycling Centre as there's been a fire in one of the bins this afternoon. We'll reopen tomorrow, but in the meantime the nearest alternative sites are at Hempton, near Fakenham or King's Lynn.</p> <p style="text-align: right;">Like Comment Share</p>
5	Link with photo	Post contains an attached photo and a link to an external web page or another Facebook page (combination of ID=2 AND ID=3).	 <p>You can help Age UK Essex raise funds by knitting mini woolly hats at the Big Knit in our libraries this Autumn. See which libraries are taking part. http://ow.ly/St6jZ</p>  <p style="text-align: right;">Like Comment Share</p>
6	Link with video	Post contains an attached video and a link to an external web page or another Facebook page (combination of ID=2 AND ID=1).	 <p>Watch this great slow-motion video from [REDACTED] Library today where knitters assembled to help raise vital funds for Age UK Essex through The Big Knit http://ow.ly/Sub7p</p> <div style="border: 1px solid black; padding: 5px;"> <p>Knit Natter And Raise Money</p> <p>A fundraiser by Knit & Knatter groups, knitting woolly hats for innocent smoothie bottles in aid of Age UK.</p>  <p>YOUTUBE.COM</p> </div> <p style="text-align: right;">Like Comment Share</p>

Topic

The *topic* of a post is determined by reading the content of the post and determining what category it fits in as per the table below. Any included links, photos, or videos can be examined to help determine the appropriate topic. When a post could fit multiple topics, the predominant topic in the post should be selected.

ID	TOPIC	DESCRIPTION (NOT INCLUSIVE)	EXAMPLE
1	Public works and town planning	Current or future planning matters, infrastructure work (including traffic/road work), new buildings, construction work, etc.	<i>A drop-in session for potential improvements in Turners Hill Road in Crawley will be held at St Edward the Confessor Parish Hall in Hillcrest Close today between midday and 9pm. Officers from the County Council will be available to give further information and answer questions. Plans will also be on display afterwards at Crawley library.</i>
2	Environment	Environmental matters, recycling, how to be more “green”, etc.	<i>Over 187 tonnes of pots, tubs and trays have been collected in #WestSussex since March! That's a lot of #recycling.</i>
3	Attention to the citizen	Information on individual/groups of citizens, recognition of citizens achievements/awards, etc.	<i>Jessica won the Young Carer Award at last year's @WSPiC West Sussex Care Accolades. Do you know a brilliant carer like her? Nominate them in 2015!</i>
4	Citizen participation	How citizens can take part in events, programmes, other community schemes, etc.	<i>There's just one more day to sign up to help thousands of children taking part in this year's Record Breaking Summer Reading Challenge 2015... So far almost 290 people have registered to help, which is great! However, we're trying to break last year's total of 298 volunteers. The deadline to sign up is tomorrow (Friday 3 July). If you are interested, visit...</i>
5	Social services	Social care, adoption services, fostering, childcare, etc.	<i>Whether it is a local child who cannot live at home or a young asylum seeker from overseas, all foster children need a place to feel safe, secure and supported during a challenging time in their lives. Please have a look at our website to find out how you could help, or call our Fostering Recruitment Team...</i>

ID	TOPIC	DESCRIPTION (NOT INCLUSIVE)	EXAMPLE
6	Citizen protection and security	Police, fire safety, crime, fraud warnings, etc.	<i>Our Trading Standards officers will be at Tesco Extra in Chichester between 10am - 12 noon offering advice and tips on how to avoid fraudsters for Scams Awareness Month #scamaware</i>
7	Public transport	Buses, trams, trains, and other public transit (including issues such as fares and routes related to them), etc.	<i>Have you seen the new bus shelters popping up around Edinburgh? JCDecaux's replacement programme is continuing over summer. Find out if your local stop is changing with our interactive map...</i>
8	Employment and training schemes	Training programmes, apprenticeships, job vacancies, etc.	<i>The following jobs at the council were advertised this week. Please share and tag your friends in the comments if you know of anyone who might be interested: Administrative Assistant Assistant Headteacher Assistant Manager...</i>
9	Health	Healthcare issues, eating healthy, staying in shape, etc.	<i>We want your views on some of these health services for children and young people. If you have 5 minutes to complete one of our surveys log on to...</i>
10	Education	Schools, colleges, universities, and other educational programmes, etc.	<i>Have you got a child starting secondary school in 2016? If so online applications have already opened to apply for places. You can find out more information here...</i>

ID	TOPIC	DESCRIPTION (NOT INCLUSIVE)	EXAMPLE
11	Cultural activities and sport	Events occurring in the community including festivals, concerts, sports matches, fayres, etc.	<i>There will be drama, passion and humour when Gala Theatre hosts a Night at the Opera this week. London Festival Opera returns to the Durham city venue on Thursday 10 September with a brand new production. The show will feature highlights from Bizet's masterpiece Carmen as well as arias and ensembles from the operas of Mozart, Rossini, Gounod, Puccini and Gilbert and Sullivan.</i>
12	Housing	Council housing, house building, housing policies, etc.	<i>The Big Home Swap is taking place on 14 July! Are you in social housing and want to move? Maybe you need a smaller place or want to be closer to family. Join us at Leeds Civic Hall to get expert advice on the best way to promote your property to others.</i>
13	Governance issues	Council meetings, council administrative notices, election information, etc.	<i>Update - Our phone lines are back up and running again. Sorry if you couldn't get through earlier but the problem has now been fixed. Thanks for your patience.</i>
14	Financial reporting	Budget information, spending plans, etc.	<i>New council plan unveiled ahead of expected financial challenges...</i>
15	Marketing/city promotion/tourism	Promoting tourist activities, activities to do in the community, awards won by the community, etc.	<i>Propaganda posters from the Great War are now on display at historic Swansea Museum. Have a look at www.swansea.gov.uk/swanseamuseum or call 01792 653763 for more information.</i>
16	Other	Anything not fitting in one of the above categories.	N/A

Intent

The *intent* of a post is determined by reading the post to figure out what the council was trying to achieve with the post, selecting the best option from the table below.

ID	INTENT	DESCRIPTION	EXAMPLE
1	Deliver information	Using post as an electronic bulletin board to disseminate information.	<i>Cornwall and the Isle of Man share the spotlight as the showcased areas at this years festival, now in its 45th year.</i> <i>The festival is a ten-day celebration of art, music, dance, film and food, which features a three hour parade of costumed dancers, pipe bands and musicians as part of a full programme of concerts, films and entertainment.</i>
2	Requesting feedback	Actively eliciting comments on the post.	<i>Where's your favourite place to spend a sunny day in #Nottinghamshire?</i>
3	Offline engagement activity	Promoting an activity occurring offline that involves engagement with government (e.g. a community meeting about the future of the libraries).	<i>Find out more about Cornwall Council's planning policy and future priorities for the Liskeard and Looe Community Network at the panel meeting on Monday 13 July. The meeting takes place from 6.30pm to 8.30pm at St Cleer Memorial Hall.</i>
4	Government website engagement activity	Promoting an activity which involves engagement with government off the social media platform and on the local government website (e.g. a feedback survey hosted on a council site).	<i>We want Worcestershire residents ideas and opinions. Please take some time to complete the Viewpoint survey and inform future decisions. Go to www.worcestershire.gov.uk/viewpoint</i>
5	External website engagement activity	Promoting an activity which involves engagement with government off the social media platform and on an external website (e.g. a feedback survey hosted on a survey company site).	<i>Please fill our survey about the future of our library services. http://surveygizmo.com/link</i>
6	Engagement on another social media platform	Encouraging users to engage on a different social media platform from the current one (e.g. directing users to comment on a topic using a Twitter hashtag).	<i>If you're on Twitter, you can enter our Southwell Poetry Festival cats competition Just tweet us @NottsCC with a photo of your cat and your favourite book including #SOPOCats</i>

Engagement Type

The *engagement type* of a post is determined by examining the likes, shares, and comments the post received., and coding it in the relevant category from the table below.

ID	ENGAGEMENT TYPE	DEFINITION
1	Base-level	Only <i>likes</i> , <i>shares</i> , or <i>comments</i> that contain only a tagged user and no substantive content.
2	One-way	Citizen leaves a comment, but with no reply from other users or the government.
3	Citizen-to-government dialogue	Citizen leaves a comment, which is responded to by the government.
4	Citizen-to-citizen dialogue	Citizen leaves a comment , which is responded to by other citizens.
5	Citizen-to-government dialogue AND Citizen-to-citizen dialogue	ID=3 AND ID=4 in the same post.

Appendix E: Local Authorities Selected for Phase II

NUTS-1 REGION	LOCAL AUTHORITIES
NORTH EAST ENGLAND	Durham County Council
	Newcastle City Council
	Sunderland City Council
	Northumberland County Council
	North Tyneside Council
	Gateshead Council
	Stockton-on-Tees
	South Tyneside
	Redcar and Cleveland
	Darlington
NORTH WEST ENGLAND	Hartlepool
	Lancashire County Council
	Manchester City Council
	Cumbria County Council
	Liverpool Council
	Cheshire East Council
	Cheshire West and Chester
	Wigan Council
	Wirral
	Stockport
YORKSHIRE AND THE HUMBER	Bolton
	Salford
	Trafford
	Oldham
	Tameside
	Rochdale
	Leeds City Council
	North Yorkshire County Council
	Bradford Metropolitan District Council
	Kirklees
	East Riding of Yorkshire
	Doncaster
	Barnsley
	Calderdale
	York
	North Lincolnshire
	Harrogate
	Scarborough

Appendix E: Local Authorities Selected for Phase II

NUTS-1 REGION	LOCAL AUTHORITIES
EAST MIDLANDS	Nottinghamshire County Council Derbyshire County Council Lincolnshire County Council Northamptonshire Leicester Nottingham Derby South Kesteven East Lindsey Amber Valley Ashfield Newark and Sherwood Gedling Bassetlaw Erewash
WEST MIDLANDS	Birmingham City Council Staffordshire County Council Worcestershire County Council Coventry Sandwell Dudley Walsall Wolverhampton Stoke-on-Trent Solihull Herefordshire, County of Telford and Wrekin Stafford Nuneaton and Bedworth Newcastle-under-Lyme
EAST OF ENGLAND	Essex County Council Hertfordshire County Council Norfolk County Council Cambridgeshire Southend-on-sea Central Bedfordshire Luton Peterborough Basildon Colchester Huntingdonshire Thurrock South Cambridgeshire Braintree Dacorum

Appendix E: Local Authorities Selected for Phase II

NUTS-1 REGION	LOCAL AUTHORITIES
GREATER LONDON	Croydon Council Barnet Council Enfield Council Newham Council Bromley Hackney Waltham Forest Haringey Merton Brent Lambeth Wandsworth Southwark Redbridge Hillingdon
SOUTH EAST ENGLAND	West Sussex County Council Oxfordshire County Council East Sussex County Council Buckinghamshire Brighton and Hove Milton Keynes Southampton Portsmouth New Forest Maidstone Reading Wokingham Oxford Canterbury West Berkshire
SOUTH WEST ENGLAND	Devon County Council Gloucestershire County Council Cornwall Council Somerset Wiltshire Bristol, City of Dorset South Gloucestershire Plymouth Swindon North Somerset Bournemouth South Somerset Poole

Appendix E: Local Authorities Selected for Phase II

NUTS-1 REGION	LOCAL AUTHORITIES
WALES	Cardiff Council Swansea Council Rhondda Cynon Taf Council Carmarthenshire Caerphilly Newport Bridgend Neath Port Talbot Wrexham Powys The Vale of Glamorgan Pembrokeshire Gwynedd Conwy Denbighshire
SCOTLAND	Glasgow City Council City of Edinburgh Council Fife Council North Lanarkshire Aberdeenshire The Highland Council Aberdeen City West Lothian Renfrewshire Dumfries and Galloway Perth and Kinross Dundee City East Ayrshire Angus Scottish Borders
NORTHERN IRELAND	Belfast City Council Armagh City, Banbridge & Craigavon Borough Council Newry, Mourne and Down District Council North Down and Ards Derry and Strabane Causeway Coast and Glens Lisburn and Castlereagh Fermanagh and Omagh

Appendix F: Questionnaire Correspondence

Initial Invitation

The following message was sent to invite council officials to take part:

To whom it may concern,

This message is intended for the staff responsible for managing the council's Facebook page — I'd be grateful if it could be passed on to the appropriate person.

My name is Matt Demana, and I'm a master's student at City University London. As part of my dissertation, I'm currently conducting a study on the use of social media (Facebook in particular) by local governments in the UK.

As part of this research, I am planning on distributing an online survey to staff who are responsible for managing the council's Facebook page. This will be helpful in reaching the overall goal of the study — to develop some suggested best practices that can be adopted by councils to best make use of Facebook to engage with citizens.

The data collected would be completely anonymous, not identifying any specific councils or individuals. At this point, I just wanted to reach out to see if you were potentially interested in taking part. If so, please do get in touch — I'd also be more than happy to chat further about the research and answer any questions you might have.

Thank you in advance for your time.

Kind regards,
Matt Demana

Questionnaire Ready

The following email was sent when the questionnaire was ready for distribution:

Hi <council official>,

Thank you for your interest in taking part. The survey is available at <http://goo.gl/forms/MO9c40AWvK>.

Let me know if you have any questions — I'm more than happy to answer them. There is a link at the end of the survey to request a copy of my findings after I complete my research, if that is of interest to you.

Thank you for all your time and help.

Kind regards,
Matt Demana

Appendix G: Blank Questionnaire

Survey: Local Government and Facebook

* Required



CITY UNIVERSITY
LONDON

Title of Study: The Impact of Local Government Social Media Posts on Engagement with Citizens

Researcher: Matthew Demana (matthew.demana@city.ac.uk)

Institution: City University London (<http://city.ac.uk>)

Information Sheet: <https://goo.gl/vklYNs>

I would like to invite you to take part in a research study. Before you decide whether you would like to take part it is important that you understand why the research is being done and what it would involve for you. Please take time to read the information sheet carefully at the following link -- <https://goo.gl/vklYNs> -- and discuss it with others if you wish. Ask me at matthew.demana@city.ac.uk if there is anything that is not clear or if you would like more information.

- The purpose of this study is to explore the relationship between the types of posts made by local governments on social media sites and the resulting engagement with citizens.
- You have been invited because of your experience with social media in a local government context.
- You will be asked to answer up to fourteen questions on the following pages. Some questions are close-ended, where you are asked to make a selection. Others will be open-ended, giving you the chance to share your thoughts.
- The survey will take you around fifteen minutes or so.
- You are welcome to skip any questions or withdraw from the survey at any time without giving a reason, without being penalised or disadvantaged in any way.
- Your identity will remain completely anonymous at all times. To help protect your confidentiality, the survey does not collect information that may personally identify you (e.g. name, email address, or IP address).
- Your answers will help to inform the write-up of my master's dissertation. You are more than welcome to a copy of the findings after the completion of the study in the Autumn, by completing this form here: <http://goo.gl/forms/C87h9uuUhN>. You will also have a chance at the end of the survey to request a copy.

Informed Consent

After reading the information sheet at <https://goo.gl/vklYNs>, please indicate your consent below if you wish to participate. Your participation is voluntary, and if you do not wish to participate please close this page now. You are welcome to skip any questions or withdraw from the survey at any time without giving a reason, without being penalised or disadvantaged in any way.

Appendix G: Blank Questionnaire

1. I agree to take part in the above City University London research project. I have had the project explained to me, and I have read the participant information sheet (<http://https://goo.gl/vkIYNs>), which I may keep for my records. I understand this will involve completing a questionnaire asking me about my experience with social media use by local government. *

Mark only one oval.

 I agree

2. This information will be held and processed to complete the research for the dissertation. I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party. No identifiable personal data will be published. The identifiable data will not be shared with any other organisation. *

Mark only one oval.

 I agree

3. I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way. *

Mark only one oval.

 I agree

4. I agree to City University London recording and processing this information about me. I understand that this information will be used only for the purpose(s) set out in this statement and my consent is conditional on the University complying with its duties and obligations under the Data Protection Act 1998. *

Mark only one oval.

 I agree

5. I agree to City University London recording and processing this information about me. I understand that this information will be used only for the purpose(s) set out in this statement and my consent is conditional on the University complying with its duties and obligations under the Data Protection Act 1998. *

Mark only one oval.

 I agree

These questions are all asked in the context of your position in managing your local authority's Facebook page.

6. 1.) How do you choose which topics to post about on Facebook?

Appendix G: Blank Questionnaire

7. 2.) In your opinion, posts using which of the following media type(s) bring about the MOST engagement from users? Please rank your top two choices.

Please select your first choice (brings the most engagement).
Mark only one oval.

- Text
- Photo
- Link
- Link with photo
- Link with video
- Video
- Prefer not to respond

8. Please select your second choice.

Mark only one oval.

- Text
- Photo
- Link
- Link with photo
- Link with video
- Video
- Prefer not to respond

9. 3.) In your opinion, posts on which topic(s) bring about the MOST engagement from users? Please rank your top three choices.

Please select your first choice (brings the most engagement).
Mark only one oval.

- Public works and town planning
- Environment
- Attention to the citizen
- Citizen participation
- Social services
- Citizen protection and security
- Public transport
- Employment and training schemes
- Health
- Education
- Cultural activities and sport
- Housing
- Governance issues
- Financial reporting
- Marketing/city promotion/tourism
- Prefer not to respond

Appendix G: Blank Questionnaire

10. Please select your second choice.

Mark only one oval.

- Public works and town planning
- Environment
- Attention to the citizen
- Citizen participation
- Social services
- Citizen protection and security
- Public transport
- Employment and training schemes
- Health
- Education
- Cultural activities and sport
- Housing
- Governance issues
- Financial reporting
- Marketing/city promotion/tourism
- Prefer not to respond

11. Please select your third choice.

Mark only one oval.

- Public works and town planning
- Environment
- Attention to the citizen
- Citizen participation
- Social services
- Citizen protection and security
- Public transport
- Employment and training schemes
- Health
- Education
- Cultural activities and sport
- Housing
- Governance issues
- Financial reporting
- Marketing/city promotion/tourism
- Prefer not to respond

Appendix G: Blank Questionnaire

12. 4.) Do you use posts on Facebook to seek feedback and opinions from users?

Mark only one oval.

- Yes Skip to question 13.
 No Skip to question 16.
 Prefer not to respond Skip to question 16.

Skip to question 16.

These questions are all asked in the context of your position in managing your local authority's Facebook page.

13. 4A.) In what topics do you seek feedback and opinions from users?

Tick all that apply.

Check all that apply.

- Public works and town planning
 Environment
 Attention to the citizen
 Citizen participation
 Social services
 Citizen protection and security
 Public transport
 Employment and training schemes
 Health
 Education
 Cultural activities and sport
 Housing
 Governance issues
 Financial reporting
 Marketing/city promotion/tourism
 Prefer not to respond
 Other:

14. 4B.) How do you seek feedback from users?

Tick all that apply.

Check all that apply.

- Actively requesting comments on a post
 Promoting an offline event users can attend to share their opinions (e.g. a community meeting)
 Linking to an activity on another website where users can share their opinions (e.g. a survey on the local government site)
 Directing users to share their opinions using another social media platform (e.g. by using a hashtag on Twitter)
 Prefer not to respond
 Other:

Appendix G: Blank Questionnaire

15. 4C.) How do you seek feedback from users MOST often?

Mark only one oval.

- Actively requesting comments on a post
- Promoting an offline event users can attend to share their opinions (e.g. a community meeting)
- Linking to an activity on another website where users can share their opinions (e.g. a survey on the local government site)
- Directing users to share their opinions using another social media platform (e.g. by using a hashtag on Twitter)
- Prefer not to respond
- Other: _____

These questions are all asked in the context of your position in managing your local authority's Facebook page.

16. 5.) In your opinion, which method for seeking feedback from users is BEST?

Mark only one oval.

- Actively requesting comments on a post
- Promoting an offline event users can attend to share their opinions (e.g. a community meeting)
- Linking to an activity on another website where users can share their opinions (e.g. a survey on the local government site)
- Directing users to share their opinions using another social media platform (e.g. by using a hashtag on Twitter)
- Prefer not to respond
- Other: _____

17. Please elaborate on your above choice.

.....
.....
.....
.....

18. 6.) When users leave their opinions as comments on Facebook posts, do you capture and pass on this feedback to other departments in the council?

Mark only one oval.

- Yes
- No
- Prefer not to respond

Appendix G: Blank Questionnaire

19. Please elaborate on your above choice.

These questions are all asked in the context of your position in managing your local authority's Facebook page.

20. 7.) In your opinion, how well do you think the council is performing in engaging with users on Facebook?

Mark only one oval.

- Extremely poorly
- Below average
- Average
- Above average
- Excellent
- Prefer not to respond

21. 8.) What do you see as the most significant barriers preventing you from better engaging with users on Facebook?

22. 9.) Are there any areas in particular that you wish to improve upon in engaging with users on Facebook?

If yes, please elaborate.

Appendix G: Blank Questionnaire

23. **10.) What steps, if any, have you taken in the past to improve engagement with users on Facebook?**

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Appendix H: Participant Information Sheet



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PARTICIPANT INFORMATION SHEET

Title of Study: The Impact of Local Government Social Media Posts on Engagement with Citizens

We would like to invite you to take part in a research study. Before you decide whether you would like to take part it is important that you understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

This study is to explore the relationship between the types of posts made by local governments on social media sites and the resulting engagement with citizens. It is taking place over a three-month period, and fulfills a requirement for a master's course of study at City University London.

Why have I been invited?

You have been invited because of your experience with social media in a local government context.

Do I have to take part?

It is up to you to decide whether or not to take part. Participation in the project is voluntary, and you can choose not to participate in part or all of the project. If you do decide to take part you will be asked to consent to the study online. If you decide to take part you are still free to withdraw at any time and without giving a reason, without being penalised or disadvantaged in any way. You may also choose to avoid answering certain questions, and you will not be penalised or disadvantaged for this.

What will happen if I take part?

- You will be asked to complete an online questionnaire
- The questionnaire is expected to take up no more than 10-15 minutes of your time
- The questionnaire will consist of both close-ended and open-ended questions

What do I have to do?

You will need to complete an online questionnaire. The questionnaire will contain questions relating to the use of social media in local government. Some questions will be close-ended, where you are asked to make a selection. Others will be open-ended, giving you the chance to share your thoughts.

What are the possible disadvantages and risks of taking part?

No particular risks or disadvantages have been identified, but you are of course welcome at any time to withdraw from the study if you choose.

What are the possible benefits of taking part?

There are no foreseen direct benefits to taking part. The results will be helpful in producing best practice recommendations for how local governments can use social media to reach high levels of engagement with citizens. The results will also be helpful for future research.

What will happen when the research study stops?

Findings from the study will be written up in my dissertation. Your responses will remain anonymous.

Will my taking part in the study be kept confidential?

- No one aside from the researchers will have access to non-anonymised questionnaire information.
- The questionnaire data will initially be stored in a secure electronic format on Google's servers in the United States. Google has Safe Harbor certification under the U.S.-EU Safe Harbor program, which means that data transfers to their US servers are permissible under the Data Protection Act 1998.
- The data will be destroyed from Google's servers and transferred to the researcher's possession on their computer or in paper form after the closing of the survey.



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What will happen to results of the research study?

The results will be written up and published in my dissertation. You will remain anonymous. You are welcome to a copy of the dissertation if you wish – please write to matthew.demana@city.ac.uk or complete the form at <http://goo.gl/forms/C87h9uuUhN>.

What will happen if I don't want to carry on with the study?

You are free to withdraw from the study without an explanation or penalty at any time.

What if there is a problem?

If you have any problems, concerns or questions about this study, you should ask to speak to a member of the research team. If you remain unhappy and wish to complain formally, you can do this through the University complaints procedure. To complain about the study, you need to phone 020 7040 3040. You can then ask to speak to the Secretary to Senate Research Ethics Committee and inform them that the name of the project is: **The Impact of Local Government Social Media Posts on Engagement with Citizens.**

You could also write to the Secretary at:

Anna Ramberg
Secretary to Senate Research Ethics Committee
Research Office, E214
City University London
Northampton Square
London
EC1V 0HB
Email: Anna.Ramberg.1@city.ac.uk

City University London holds insurance policies which apply to this study. If you feel you have been harmed or injured by taking part in this study you may be eligible to claim compensation. This does not affect your legal rights to seek compensation. If you are harmed due to someone's negligence, then you may have grounds for legal action.

Who has reviewed the study?

This study has been approved by City University Department of Computer Science Research Ethics Committee.

Further information and contact details

This study is being conducted by:

Matt Demana | matthew.demana@city.ac.uk

This study is being supervised by:

Andrew MacFarlane | a.macfarlane-1@city.ac.uk | +44 (0)20 7040 8386

Thank you for taking the time to read this information sheet.

Appendix I: Post hoc tests

Media Type

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Link-Text	-82.963	52.012	-1.595	.111	1.000
Link-Link with video	112.938	71.555	1.578	.114	1.000
Link-Link with photo	264.272	31.715	8.333	.000	.000
Link-Video	-397.667	103.284	-3.850	.000	.002
Link-Photo	-474.524	41.004	-11.573	.000	.000
Text-Link with video	29.975	79.975	.375	.708	1.000
Text-Link with photo	181.309	47.767	3.796	.000	.002
Text-Video	-314.704	109.286	-2.880	.004	.060
Text-Photo	391.560	54.380	7.200	.000	.000
Link with video-Link with photo	151.334	68.531	2.208	.027	.408
Link with video-Video	-284.729	119.826	-2.376	.017	.262
Link with video-Photo	-361.586	73.294	-4.933	.000	.000
Link with photo-Video	-133.395	101.213	-1.318	.188	1.000
Link with photo-Photo	-210.251	35.465	-5.928	.000	.000
Video-Photo	76.857	104.497	.735	.462	1.000

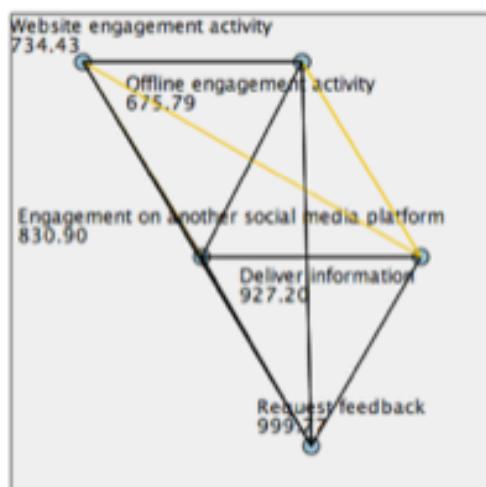
Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Appendix I: Post hoc tests

Intent

Pairwise Comparisons of intentCombinedCats



Each node shows the sample average rank of intentCombinedCats.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Offline engagement activity-Website engagement activity	-58.634	73.244	-.801	.423	1.000
Offline engagement activity-Engagement on another social media platform	155.105	119.140	1.302	.193	1.000
Offline engagement activity-Deliver information	251.406	60.160	4.179	.000	.000
Offline engagement activity-Request feedback	-323.974	155.295	-2.086	.037	.370
Website engagement activity-Engagement on another social media platform	96.471	112.555	.857	.391	1.000
Website engagement activity-Deliver information	192.773	45.755	4.213	.000	.000
Website engagement activity-Request feedback	265.341	150.303	1.765	.078	.775
Engagement on another social media platform-Deliver information	96.301	104.514	.921	.357	1.000
Engagement on another social media platform-Request feedback	-168.869	177.258	-.953	.341	1.000
Deliver information-Request feedback	-72.568	144.379	-.503	.615	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Appendix J: USB Drive Contents

The USB drive deposited with the Programmes Office contains the following:

- Full Phase 1 data in SQLite database format: resultsDB.sqlite
- Anonymised questionnaire response data in CSV format: questionnaireResults.csv
- Post hoc test results for Topic in a PNG format: topicPostHoc.png

If you do not have access to the USB drive, these files are available upon request to matthew.demana@city.ac.uk.