Technological acceptance and media literacy 2005-2018: a longitudinal study of outlooks before, during and post internet adoption

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The growth and acceptance of the internet and associated technology has led to drastic social change regarding day-to-day behaviour. Whilst the uptake of changing technology has been extensively researched, studies tend to focus on the dichotomy between 'user' and 'non-user' adoption and behaviour. This paper builds on existing knowledge by longitudinally exploring nuances within the 'user' grouping, answering two research questions: what discrepancies exist in attitudes shown by those considered as 'users', and what implications may these have for obtaining and maintaining media literacy? This study analysed data from the UK communication regulator Ofcom's Adult Media Lives project; a qualitative study consisting of annual in-home in-depth interviews with the same 18 participants between 2005-2018. Through a thematic analysis of the raw video footage from each interview, this unique methodology provides a deeper understanding of how the same 'users' outlooks may change over time, exposing how changing

attitudes can be a key driver behind the development of media literacy. Four different attitudes were identified: enthusiastic, accepting, resistant and apprehensive. Following positive or negative experiences participants' outlooks altered over time, shaping their use and often motivating a movement between these fluid attitudinal categories. With these attitudinal shifts their media literacy skills also fluctuated, illustrating how the attainment of literacy is a volatile, non-linear process, shaped by personal experiences. This study exposes the limitations of only examining a 'user'/'non-user' dichotomy, and highlights the importance of considering the nuances between 'users' when studying media literacy.

Keywords

media literacy; attitudinal change; internet use; longitudinal data

INTRODUCTION

The development and acceptance of the internet in the UK has drastically reshaped how people undertake day-to-day tasks (Castells, 2010; Couldry, 2012; Djick, 2013). The increasing uptake of the internet and associated digital technology (such as smartphones, tablets, laptops) between 2005-2018 meant that by 2018 its use was socially expected and unavoidable (Lievrouw & Livingstone, 2006; Haddon, 2007; Castells, 2010; Park, 2012; Mosco, 2017). However, research has shown that there is a digital divide between the 'haves' and 'have nots', and that some still cannot or will not use the internet and associated technology, dramatically impacting on social wellbeing and inclusion in everyday life (Hargittai, 2002, 2010; Rogers, 2003; Dennis, 2004; Livingstone, 2004; Notley, 2009). While research has been conducted on the impact of not engaging with the internet, there is a lack of research considering the 'grey

areas' beyond the 'have' and 'have nots', the 'users' and the 'non-users', where the digital divide is not always obvious and some people may move in-between 'having' or 'not having' (Livingstone & Bovill, 2002). Furthermore, focus is often placed on uptake and use, rather than on outlooks towards the internet and how this drives said use (Livingstone & Bovill, 2002; Rogers, 2003). Researching users as nuanced agents – rather than as binary groups – will provide new insight for the two core research questions in this paper: what discrepancies exist in attitudes shown by those considered as 'users', and what implications may these have for obtaining and maintaining media literacy?

I analysed longitudinal data gathered by the UK communications regulator Ofcom, conducting a unique thematic analysis on their Adult Media Lives qualitative datasets. This data was gathered annually from 2005 through interviews with the same 18 people. This methodology allowed for a crucial insight into how the same person's attitudes and usage varies over an extended period, and what repercussions this may have. A thematic analysis of the data uncovered different attitudes towards the internet: these attitudes will form the framework for this paper's insights. By focusing on four different attitudinal responses to the internet (i.e. enthusiastic, accepting, resistant or apprehensive) this study highlighted how

attitudes shaped reported behaviour, 'usage' and levels of literacy over time.

LITERATURE REVIEW

Everett Rogers (2003) researched the diffusion of innovation extensively since the 1950s. He focused on the initial adoption of an innovation, contending that uptake happened over an extended period with individuals adopting at different rates (Rogers, 2003). He grouped 'types' of adopters into five categories: innovators, early adopters, early majority, late majority and laggards (Rogers, 2003). His research instigated an academic interest in these adopter groups, where scholars have considered the rate of adoption and its implications (Neuman, 1991; Livingstone & Bovill, 2002; Rogers, 2003). His theory of diffusion has been applied to the rapid growth of the internet, informing understandings of who is adopting the internet, the reasons for this, and who may be isolated from adoption (Livingstone & Bovill, 2002). Rogers (2003) argued that the introduction and widespread adoption of the internet has disrupted understandings of diffusion, where the ability to transfer information over vast distances has accelerated the diffusion process and offered new access opportunities to potential 'laggards'. However, he also contended that despite the rapid diffusion of the internet to the point it may eventually be ubiquitous, there is still a divide

between those able to learn about or access certain content online, and those who are unable (Rogers, 2003).

Nearly two decades after Rogers' last edition the subject of access to the internet is still of great interest to numerous disciplines (such as media, pedagogical and sociological studies), and is strongly related to media literacy research. The term 'media literacy' broadly relates to the ability to access, use, understand, and create with an array of media (Hobbs, 1998; Livingstone, 2004; Parry, Burnett and Merchant, 2017; Ofcom, 2018). In more recent years this term has been applied to ICT skills specifically, where scholars argue that computers and the internet require a new form of literacy (Livingstone, Bober & Helsper, 2005; Hargittai, 2010; Parry et al., 2017). Much research on ICT-literacy focuses on those who have access to and are using the internet and those who do not, considering the repercussions this may have (Hargittai 2002, 2010; Dennis, 2004; Livingstone, 2004; Notley, 2009). This 'digital divide' is defined by Boonaert and Vettenburg (2011, p.55) as 'unequal access to the internet and its use because of the interplay between different factors' and is typically associated with demographics (see also Livingstone & Bovill, 2002; Rogers, 2003). This divide is also referred to as 'the participatory gap' (Hargittai & Walejko, 2008), or 'social exclusion' (Seiter, 2007;

Notley, 2009), where those who are unable to regularly access the internet are at risk of being excluded from behaviour normalised by the society they live in (Rogers, 2003; Seiter, 2007; Tsatsou, 2011).

Although access is emphasised as a key component of media literacy, it has been contended that access alone is not enough: even those with similar access to the internet vary in terms of how they use it and the level of literacy they demonstrate (Hargittai, 2002; Livingstone, Bober & Helsper, 2005). Thus, considering adoption alone does not provide enough insight into usage. Rogers' (2003) focus on the rate of adoption does not fully account for the experiences of individuals post adoption, and Rogers has been critiqued for adopting a linear approach when considering adoption, not accounting for how media acceptance may vary in its relevance and use in a specific environment (Livingstone & Bovill, 2002). Rogers (2003) himself noted that there is a tendency in diffusion research to focus on successful adoption by early adopters, and there is less research that considers negative experiences during and post adoption. Using computers does not equal a constantly positive move towards ICT-literacy: this is a volatile process with no clear completion (Hargittai, 2002; Boonaert & Vettenburg, 2011; Tsatsou, 2011; Park, 2012). Livingstone and Bovill (2002) further note that diffusion theory tends to consider media in isolation, rather

than accounting for the portfolio of media an individual may have previously used or is currently engaging with. Finally, the inclination to focus on 'users' and their usage behaviour means there is a lack of consideration for personal outlook: the focus is on reported behaviour and associated demographics, not attitude (Seiter, 2007; Hargittai 2002, 2010).

These limitations of diffusion research and studies on media literacy expose where further research is beneficial. In this article I explore a range of outlooks regarding the internet over time – examining both positive and negative experiences before, during and after adoption – providing a deeper understanding into how individuals respond to changing technological and social environments. By focusing on attitudinal stances, rather than demographic data alone, I provide insight into how different 'users' develop media literacy over time. From this it is possible to gain insight into how and why a digital divide may exist within the 'user' grouping, not just outside of it, and how attitudes may motivate this.

The attitudes of adopters and the role these play in their use of technology have already been researched, with scholars examining the attitudinal drivers and inhibitors associated with likelihood to adopt new technology (Parasuraman, 2000; Venkatesh, 2000; Porter & Donthu, 2006). McElroy, Hendricksen, Townsend and DeMarie (2007) promoted consider-

ing personality traits when studying motivations behind internet use, identifying five personality factors to explore connections between self-efficacy and certain aspects of internet use (McElroy et al, 2007). Ofcom categorised participants into attitudinal groups based on their digital lifestyles following a 2009 quantitative study (Ofcom, 2009). These studies all provide evidence that there are connections between attitudes and use. However, existing studies tend to be quantitative in nature and involve relatively short research periods. There is a lack of insight into how the same peoples' outlooks on and experiences with technology may shape behaviour over multiple years (Livingstone & Bovill, 2002; Rogers, 2003). In order to address this gap I examine the outlooks of the same individuals longitudinally to provide a unique insight into how groups of 'users' may vary considerably, and how outlooks within these groups may shape how media literacy is obtained, maintained or lost over time.

METHODOLOGY

Ofcom is the UK communications regulator. Part of their responsibility is to ensure and promote media literacy, which includes conducting regular research on media use and attitudes. One such study is Adult Media Lives: a qualitative longitudinal study that started in 2005 and connected with the same

18 people annually. The 18 participants represented a wide demographic spread and most entered the study in 2005 or 2006, with further participants recruited over time (see Table 1). Consent was gathered at recruitment and again following the 2018 change to General Data Protection Regulation (GDPR). Participants consented for data to be used by third-party academic or research organisations. All names referenced in this paper are pseudonyms, to protect identity.

Each year the same moderators from an external market research agency conducted 1-2 hour long in-home filmed in-depth interviews. Discussion covered usage and attitudes regarding media, any changes in personal circumstances, and any pertinent wider social or technological changes that year.

I used this data to analyse how media literacy skills and attitudes may alter over time (see Table 1). I observed the raw video footage from each interview between 2005-2018, building a cohesive understanding of participants' lives. By not conducting the interviews myself I was able to observe themes as they emerged organically from the data. These themes shaped the structure of further analysis. Each interview was transcribed, analysed and themed using the analysis software NVivo 11 and thematic analysis: an analytical technique used to garner themes in a qualitative dataset (Guest, McQueen and Namey, 2012).

Table 1: Media Lives participants

Pseudonym name	Job	Year recruited	Age during study
Chloe	Student	2014	14-18
Tim	Student	2013	15-20
Robert	Student	2014	18-22
Jenny	Student	2008	16-26
Dean	Various	2006	16-28
Julia	Doctor	2006	17-29
Daniel	Bank worker	2005	22-35
Dai	Web Officer	2006	27-39
Denise	Charity fundraiser	2005	28-41
Mick	Engineer	2005	31-44
Sheila	Stay-at-home mum	2005	32-45
Sally	Housing Officer	2005	39-52
Elizabeth	Casual worker	2006	45-57
Peter	Alarm fitter (unemployed several years)	2008	47-57
Donald	Semi-retired police officer	2006	52-64
Cathy	Retired	2008	64-74
Eleanor	Retired (left study in 2016)	2005	69-80
Mary	Retired	2005	72-85

Utilising thematic analysis as an analytical approach allowed for the uncovering of overarching themes and subthemes. As this study was exploratory in nature the research questions and analytic categories were not predetermined: instead the research questions formed during the observation of the videos and considering existing academic debates, and the themes and codes emerged following re-reads of transcripts (Guest et al, 2012). Thus I underwent a dynamic research process of repeatedly moving between theory and the data to form research questions and finally thematic categories (Daly, 2007).

The analysis uncovered that participants discussed different outlooks and reported behaviours regarding their uptake and use of the internet and digital technology. There were patterns and consistencies in these outlooks, allowing for participants to be clustered based on how they felt about the internet. These different stances are a key theme to emerge from the analysis, and will provide a lens through which to examine how participants' outlooks towards the internet changed over time (the themes thus provide both an analytical framework and outcome of this article). The terms used for these different groups were discerned qualitatively based on reported behaviour and attitudes regarding the internet. This included: how positive or negative participants were when discussing the internet and new technology; how engaged

and explorative participants claimed to be; and how large a role the internet appeared to play in their lives. The attitudes conveyed were categorised as 'enthusiastic', 'apprehensive', 'accepting' and 'resistant'. These were not finite or impassable groups: participants changed their attitudes over time thus moved across these groups. This analysis tracked these shifts longitudinally.

RESULTS

By identifying different responses to technology and mapping how they altered over time it is possible to address my research questions by providing a much-needed insight into nuances between 'users'. This paper will examine how the same participants felt about and engaged with the internet over time by discussing three different periods: 2005-2008; 2009-2013; 2014-2018. Each period involved different technological developments and social expectations regarding adoption and use. In covering different periods in this manner I am able to examine how technological innovation and social changes may shift over time, intersect and relate to attitudinal changes.

2005-2008: initial responses to the changing technological landscape

At the start of the study it was evident that numerous participants had already begun to incorporate the in-

ternet and digital technology into their everyday lives, responding positively to the changing technological landscape. For some, being able to use the internet across various technologies was becoming more important than engaging with other forms of media:

Yeah [the internet] plays a much bigger role than the tele and that, the internet and my mobile phone and iPod are the most important thing, you can take the tele away (Dean, age 16, 2006).

The novelty of the internet and associated technology meant that it was capturing the interest of participants, to the point that it was garnering more attention than familiar household technology. These new devices were adopted with relish and passion by certain participants, disrupting their everyday use of media. Use of the internet provided these participants with new means for managing their day-to-day lives, facilitating information seeking and the development of new literacy skills:

I'm captain of my university football side, part of my role is to train the team every week [...] I look online for different drills to use [...] so for that the internet has been really, really useful to me (Daniel, age 22, 2005).

Mobile phones were of particular interest, posing

exciting possibilities for reshaping how they experienced socialising, education and entertainment:

Well the obvious one to talk about is the iPhone which is great, not just from a hardware perspective but you've got the app store, so it's not just phoning: you can pick and choose what's on there [...] there's mobile internet [...] you can access news, sports, weather [...] all that kind of content wherever you are (Dai, age 29, 2008).

Dai epitomised an attitude numerous participants displayed during this time: enthusiasm towards new technological innovations. As such, these participants showed an enthusiastic outlook: they sought new opportunities online, considered how the internet could facilitate certain activities and integrated it into their daily activities, learning as they explored and thus building media literacy. The majority of the participants conveyed enthusiastic outlooks at the beginning of the study (see Table 2).

At this stage two participants also adapted their behaviour in response to the shifting technological landscape, but approached these changes with less interest. For example, Donald considered adopting new mobile technology but with little enthusiasm:

I've actually retained my old phone like a brick, but it does me for the purpose, but should you ever come next

year I will anticipate being upgraded next year because I think it's time to move slightly forward on it (Donald, age 54, 2008).

Donald's expectation that he would purchase a smartphone was because 'it's time to move forward', rather than due to a genuine interest. Sally also adopted a mobile phone prior to the beginning of the study, but showed a lack of enthusiasm for it, not understanding why her loved ones considered it an essential item for routine activities:

This is my phone, it's an old one. I actually call it my tracking device. I was going out the door, and [my husband] will say [...] 'have you got your mobile phone with you?!'. And I'm thinking 'no I haven't got my mobile phone with me, I'm going to the pub at the end of my road, why would I need my mobile phone?' (Sally, age 39, 2005)

As such, these participants were accepting of technological change, rather than enthusiastic about it. They adopted new technology and used it, but didn't display a genuine interest, even expressing negative feelings. They were akin to Rogers' (2003) early and late majority adopters, where they observed others (such as family members) adopt first and followed suit.

Few people had an accepting outlook in the early years of the study, mainly because many participants at this stage had more extreme views, where they were either enthusiastic or actively resisted the change. For instance, some participants claimed to be resistant to the idea of utilising the internet or adopting associated devices. These participants chose to avoid using the internet, refusing to engage with technological changes that facilitated it despite the encouragement from those around them:

The frustrations I get is the way everybody assumes you've got a computer [...] I retired and my husband says 'buy yourself a computer' but I said 'no': I don't want one [...] they're time wasters in my book (Cathy, age 64, 2008).

I know that you can access the internet [but] I can't see the purpose of having that on a phone when the screen is so small [...] I've got it but I never use it and I never will use it (Mick, age 31, 2005).

These participants showed a resistant attitude. They were aware of the shifting expectations regarding internet and device uptake, but avoided use. Mick argued that he couldn't see the purpose of the internet on his phone due to his perception of its limited

capabilities, even though he had the facility already available on his device. He was – in practical terms – an adopter of the internet: he had a device that facilitated its use. However, his refusal to engage with it illustrated the subtle yet meaningful disparities across those considered ‘users’, highlighting the need to consider actual usage behaviour, not just ownership or access. Despite having access to the internet he failed to explore its functionalities, stalling his ability to build further literacy skills. There were almost as many participants with a resistant outlook as those with enthusiastic outlooks between 2005-2008, showing the extent to which the growth of technological change, accompanied with the shift in social expectations, polarised opinion (see Table 2).

Finally, there were participants who were curious about the internet and its possibilities, but claimed that they lacked the confidence or knowledge to pursue this curiosity. Rather than showing disinterest or dislike for the internet, these participants were keen to build literacy but worried about the negative repercussions of doing something ‘wrong’:

What would be nice to do on the internet is send pictures to my friends and to people that I’ve been writing to ‘cos it’s a visual, but when I can’t get into my email that makes me extremely frustrated and quite angry, I could throw it all away (Eleanor, age 69, 2005).

Table 2: 2005-2008 participant outlooks

Resistant	Accepting	Apprehensive	Enthusiastic
Elizabeth	Donald	Eleanor	Jenny
Cathy	Sally		Dai
Mick			Denise
Mary			Julia
Peter			Daniel
			Sheila
			Dean

Eleanor was aware of the social benefits of the internet and keen to be involved, but her lack of literacy with online services left her frustrated and nervous. She was thus apprehensive in her approach to the internet, where she often tried but encountered difficulties, especially when she felt she was alone in her efforts to learn:

My son uses [the internet] much more than any of us do, and also he’s much more computer literate than either my husband or me. But he’s not very good at showing me what to do, he doesn’t like to take time out- or he shouts at me and tells me I should know how to do it, and I don’t [...]. I think I could learn a lot from him if he was prepared to show me, but he chooses not to (Eleanor, age 69, 2005).

Experiences such as these were extremely demotivating, and could arguably have been the beginning of feelings of exclusion for participants such as Eleanor. As time went on it was apparent that these moments motivated a negative outlook that shaped her experiences for the rest of the study.

Table 2 shows how various participant outlooks shaped media literacy. Between 2005-2008 most participants were enthusiastic about the shifting technological landscape. They were embracing new technologies and were excited to see how they could benefit their everyday lives. Enthusiastic users adopted an explorative approach thus were regularly exposed to new opportunities to learn and develop literacy. Accepting users also developed literacy in

that they increased their use of certain technology. However, their lack of enthusiasm meant they rarely explored their devices' capabilities beyond the basic functionality they deemed essential for their needs, stalling further learning.

However, a number of participants were also resistant to this change, avoiding using the internet. It was generally the older participants who felt either resistant or apprehensive at this stage. Resistant users actively avoided learning more about the internet, rejecting opportunities to develop literacy. Apprehensive users wanted to become more literate, however were easily knocked by negative experiences, hindering skill development.

Mary, Eleanor, Cathy, Peter and Elizabeth (five out of the six oldest participants) all felt uncertain about adopting new technology, expressing concerns or disinterest. These attitudes would shape how they behaved and responded to technological change as time went on, often hindering their uptake of future devices and their experiences with them. These participants risked being at a detriment when it came to using the internet in the future, as they missed out on early opportunities to experiment and develop literacy skills at a time when many of the other participants were doing so. This was illustrated when these participants entered a time where technology was rapidly adopted in the UK and expectations shifted to

assumptions of internet use: 2009-2013.

2009-2013: shifting expectations

By 2010 74% of the UK population had adopted the internet, and an ever-growing amount (31%) of internet users were going online on their mobile phones (Ofcom, 2011). By 2013 82% were using the internet, 92% used a mobile phone, and 62% of adults had a smartphone (Ofcom, 2014). These developments in technology correlated with a shift in priorities regarding the use of the internet: participants discussed a growing dependency on the internet and digital technology (especially smartphones), where they felt more comfortable with than without it:

I love [my phone] yeah [it's] great, couldn't live without out, I know it's what everyone says but it's true (Julia, age 24, 2012).

Do you use your iPhone?

Yeah a hell of a lot more [...] you can be in bed falling asleep then think 'oh I didn't do this', pick your phone up and in a few minutes it's done, rather than having to boot up your laptop (Daniel, age 29, 2012).

Many continued to have an enthusiastic outlook during this time as they kept up to date with techno-

logical developments and embraced new platforms. This was also a time where some initial sceptics altered their outlooks and developed their use of technology as well as their media literacy, motivated by the increased expectation of use from those around them. For instance, by the early 2010s Mick was no longer resistant to mobile internet use: he became increasingly accepting after adopting an iPhone that he used both for work and socialising:

I use my iPhone a lot more now, cos obviously I pick up my emails and- when you're on the move. And if you're [staying at a hotel for work] for a night for what I need you can get it there on the iPhone. [...] I used Skype to phone home and speak to the wife and kids through the internet (Mick, age 36, 2010).

Much of Mick's changing attitude towards technology was driven by his new job requiring internet and mobile use: without the appropriate skills he would not be able to fulfil a key aspect of his new role, thus it was essential that he increased his use and literacy. This was also the case for other participants, where work environments increasingly assumed (and enforced) use of the internet:

My job is going to be going mobile, no longer office based, so we're getting Blackberries [...] I'm getting

the Curve I think, the one with a keyboard, and we're gonna be getting Dongles [...] it's so we can quickly access emails without turning a laptop on (Denise, age 34, 2011).

Rogers' (2003) refers to 'authority innovation decisions', where an individual has limited choice as adoption and use is enforced by someone in authority (p29). This was evident for these participants, as they were required by work to adopt and navigate technology they may have otherwise missed. Furthermore, these participants discussed the ability to complete tasks on mobile phones rather than laptops as a key reason for their behaviour and attitude change. Here, innovation and social change intersected: technological innovations corresponded with the increasing social expectation of ownership and use, where the development of media literacy became increasingly imperative. As such, it was apparent that in responding to the growing social emphasis on the use of technology in the early 2010s, many members of the sample grew more literate and comfortable with the internet and digital technology.

Despite this shift, there were still some participants who continued to begrudge the role of technology in the lives of those surrounding them. Some discussed becoming increasingly frustrated with the growing societal dependency on the internet and es-

pecially mobile phones: they commented on other people's apparent addiction to technology, finding it anti-social and rude:

I said to [my boyfriend], 'I wish you looked at me the way you looked at your iPhone', oh the love in his eye! First thing in the morning, last thing at night, he can't turn away from it [...] it's just a phone! (Elizabeth, age 48, 2009)

Beyond this frustration with other people's use, they began to feel forced into adopting technology themselves. Cathy continued to protest about pressure from others to adopt the internet, discussing external judgement and cajoling to change her behaviour and follow this growing social norm:

Do you feel bullied into it?
U-huh [...] it's the attitudes, 'you don't have a computer?!' As if you've got something contagious (Cathy, age 66, 2010).

Cathy grew defensive, refusing to change for other people while resenting the perceived pressure she was under. For Cathy, this meant she became increasingly resistant to the adoption of computers and the internet. However, Cathy and Elizabeth were now in the minority, as Table 3 illustrates how initial re-

sistors began to tentatively change outlooks following this shift in social expectations. For example, Mary was concerned about being left behind as she aged, and thus became more accepting in her outlook and bought a computer in 2012:

You don't realise how people feel when they're 80, if you sort of dwell on it, on how long will I be able to do this, how long will I be able to cope [...]. So it's good to keep up with the modern stuff (Mary, age 79, 2012).

While Mary still did not portray an enthusiastic outlook, she discussed feeling that by keeping up 'with the modern stuff' she was able to maintain her independence and continue to feel involved in a society that increasingly expected an acceptance of technology.

Table 3 shows that the number of participants with a resistant attitude decreased by 2009-2013. Those participants who became less resistant and more accepting (either willingly or as a result of coercion), also experienced opportunities to develop their media literacy. However, this table also highlights that more participants grew apprehensive in their outlooks regarding the internet. Their negative experiences made them concerned that they were somehow lacking the literacy skills apparent in those around them. This knocked their confidence and in

certain cases meant they decreased their use, avoided opportunities to build their own knowledge and became more sceptical about the internet.

Finances and income were a considerable concern for those who felt apprehensive during this time: they had to carefully consider what technology they could afford to have in the house, limiting how much choice they had regarding access to and use of the internet. For instance, Sheila struggled as she tried to raise her two sons in an increasingly technologically dependent time, where their teachers' expectation that homework was completed electronically meant the acquisition of computers was deemed a necessity, and without it they would be left out:

[My son] does his homework and that on the computer, which I do think- not everyone has got a computer [...] well what if they haven't got one, what if someone can't afford to have one? And like yeah, they automatically think you have one (Sheila, age 38, 2011).

Sheila's initial enthusiasm for the internet diminished as she was faced with financial difficulty that made purchasing the technology needed to complete everyday tasks challenging, thus her uptake became cautious and discerning, rather than the result of excitement.

Peter also suffered serious financial setbacks fol-

Table 3: 2009-2013 participant outlooks.

Resistant	Accepting	Apprehensive	Enthusiastic
Elizabeth	Sally	Eleanor	Jenny
Cathy	Mick (was resistant)	Sheila (was enthusiastic)	Dai
	Mary (was resistant)	Dean (was enthusiastic)	Denise
		Peter (was resistant)	Julia
			Daniel
			Donald (was accepting)

lowing a redundancy in 2009, which in turn negatively impacted on his attitude towards the internet and digital technology. He struggled for many years to gain new employment, meaning he also missed out on numerous opportunities to build his literacy skills with changing technology. He was initially resistant to internet use, but felt he had to use it in order to conduct job searches and find new employment. However, his resistant outlook led to a lack of confidence and literacy: he approached using the internet apprehensively, where negative experiences online shaped his overall outlook:

It hasn't worked, I must have sent my CV however many times [...] As I say 80% of people don't even reply [...] First time I looked for jobs I thought I was on a site

for jobs and turns out I was on a site of adverts [...] I scratched my head for a bit [...] I was lost that day (Peter, age 50, 2011).

This apprehension was only made worse when he fell into a vicious cycle where he was not qualified enough to use the new technology work demanded, but couldn't gain experience with relevant technology because he couldn't work:

'Cos of the training I was on [at my old job] there were new products coming in everyday, new technology coming in everyday, so I knew you were always called in for a training course [...] so I missed out with that over the past 5 years [while unemployed]. And with the new technology [...] there's some things where it's 'well

you have to be familiar with such and such'. Well I'm not (Peter, age 53, 2014).

As such, Peter suffered financial concerns and was increasingly at risk of being excluded from the job market, due to his lack of aptitude with new technology. He had narrow experiences with internet use and the often-negative results of his endeavours promoted feelings of apprehension.

During this time some members of the sample became concerned about exclusion, fearing alienation as technology developed. Their initial avoidance of learning how to use technology in the early years of the study meant they now felt they were behind other people:

I suppose what I would really like is some little person on my shoulder saying 'no don't do that, do that', but for most people that's not available [...]. I think certainly people that haven't used it before need some sort of guidance [...] there's so much going on out there actually, I don't know half of it, a quarter of it actually, and you can easily get isolated because the world's moving on (Eleanor, age 75, 2011).

This stage of the study highlighted a period where technology continued to develop, and, with this, social expectations and demands also greatly altered.

This was generally a period of excitement for most participants as they learnt new skills, built literacy and grew in confidence. However, it was also a time of frustration for those who continued to resist internet use, and anxiety for apprehensive users who grew increasingly concerned about becoming isolated and excluded, as pressure to not only own but be literate with technology mounted. As such, rather than a positively linear development of literacy skills over time, it was evident that some participants' movements towards literacy were halted by social issues, and others were in fact negatively impacted, where they arguably became less literate as a result of not understanding or recovering from negative experiences.

2014-2018: the normalisation of internet use

By 2017 88% of the population of the UK were online, and smartphones had become the form of technology that would be most missed (Ofcom, 2018). Those who continued to feel enthusiastic considered the internet and mobile technology to be an essential part of their lives at this stage, both personally and professionally:

There's a real thing that if you don't go on your phone like you get anxiety [...]. 'Cos I run my business from it as well (Jenny, age 26, 2018).

We've got phones, tablets, laptops. Using a lot more internet-based research for business (Denise, age 41, 2018).

The majority of participants were now enthusiastic or accepting of the internet, as shown in Table 4. The three new participants recruited in this stage (to account for the aging sample) all entered with enthusiastic outlooks, using the internet throughout the day across multiple devices:

I've got the same iPhone I had last year still, [but I am] getting a new one. I have that all the time, wouldn't be able to live without that. I have a laptop for doing my homework on and Netflix. But mainly I use my phone for everything, like Facebook, Instagram, messaging, I just wouldn't be able to get around without it (Chloe, age 15, 2015).

Chloe illustrated an enthusiasm for change and discovering new technology here, as despite her current smartphone providing her with multiple options for use, she still planned to adopt the next device upgrade once available. Her hunger for new devices meant she was regularly presented with opportunities to build literacy skills as she encountered and explored new technological features every few years.

Table 4 shows that normalised social expecta-

tions of use meant that by now no participants were resistant. The majority were enthusiastic, having developed confidence and a zest for learning new skills. The growing amount of ‘accepting’ participants meant that there was still an inertia towards building literacy: these participants settled into habitual use of the internet, appearing to deem the acquisition of further literacy skills unnecessary. The apprehensive participants continued to struggle to build confidence, and with this they also continued to lack – even lose – media literacy.

A number of participants now displayed an accepting attitude, having either become less resistant (Cathy and Elizabeth) or less enthusiastic (Daniel) in the process. Despite six participants expressing ‘accepting’ attitudes, there were clear nuances and differences within this group. For instance, participants such as Sally and Mary were pragmatic about their perceived need to use the internet in everyday life: despite not feeling personally enthusiastic about it they adapted their use in order to gain the most they could from the internet. Sally illustrated this in her response to her new smartphone in 2016, when the enthusiasm of those around her outweighed her own, but she was still able to find features to engage with:

I got used to it quite quickly, but it’s again like all of a sudden you get this phone and there’s 100 hands

Table 4: 2014-2018 participant outlooks.

Resistant	Accepting	Apprehensive	Enthusiastic
	Sally	Eleanor	Jenny
	Mary	Sheila	Dai
	Elizabeth (was resistant)	Dean	Denise
	Cathy (was resistant)		Julia
	Peter		Donald
	Daniel (was enthusiastic)		Tim (joined in 2014)
			Robert (joined in 2013)
			Chloe (joined in 2014)
			Mick (was accepting)

around it: ‘this is what it does, you can get this, it can do this, you need to download this mum it can do it quicker and this better’. And you’re thinking ‘take a deep breath’. ‘Cos all of a sudden you’re thinking ‘well is this my phone or everyone else’s?’ But I have used it a lot more than – the camera, I have used the camera I have to say, the camera is brilliant (Sally, age 50, 2016).

Other participants who were ‘accepting’ in terms of integrating the internet into their lives still remained resistant in spirit. Elizabeth adopted smartphones and Wi-Fi into her home over the course of the study, but argued that it was because of people

she knew – namely her lodger – encouraging her to do so:

I only do things ‘cos I have to, not ‘cos I want to (Elizabeth, age 53, 2014).

I’ve been dragged into it unwillingly, and my lodger is now trying to get me to buy a larger 7-inch screen phone so I can Skype via phone (Elizabeth, age 54, 2015).

In both these instances Elizabeth and Sally gave in to the encouragement and pressure from their

family, friends and acquaintances, adopting technology with features beyond their interest in order to please others.

Conversely, Daniel had been enthusiastic about the internet and new technology for years, however by this stage he was becoming increasingly frustrated with many aspects of the internet, especially regarding threats to his personal privacy and control:

I'd really like to delete my Facebook account, partly 'cos I don't use it, partly because there are clearly risks with them holding your information [...]. But there have been one or two occasions [...] where I need to get in contact with somebody and I don't have any of their details, and I know I can get them on Facebook where I wouldn't be able to otherwise (Daniel, age 35, 2018).

In this instance his increase in literacy (in terms of his increasing awareness of privacy concerns regarding data acquisition) actually motivated his wish to decrease his use, where his growing frustrating with social media in particular meant he claimed to have reduced the amount he used the internet by the end of the study. However, the above quote illustrates that no matter how exasperated he grew, he still didn't feel he could fully reject the use of the internet and social media as it was so integral to his social life, as such he was still 'accepting'. Thus, it was apparent that by

this time those with 'accepting' attitudes varied considerably, once again highlighting that although participants discussed similar reasons for adoption and even usage behaviours (for instance, using the internet to stay in touch with others) there were drastic differences in how they felt about such use and how they built and maintained media literacy.

Despite this overall movement towards using the internet, by the end of the study there were still three apprehensive participants struggling with the internet and encountering issues. This was attributable to negative trial and error experiences. For instance, in 2016 Dean began to tentatively increase his internet usage. However, in doing so he fell victim to a phishing scam, losing confidence as a result and becoming increasingly jaded about the internet:

The one thing I've tried to do online and I've messed it up, I messed it up, I didn't like it before, that one thing I tried to do it didn't work, and it's just put me back even further (Dean, age 27, 2016).

Negative experiences such as this greatly impacted on his willingness to experiment and learn online, where instead he wanted to limit – even stop – his use. As a result by 2018 he was deeply resentful over the now normalised assumption of internet use, stating that he wished he lived in a time where there was

no social expectation of internet use:

When the internet wasn't around back in the day when Nan and Grandad were around none of this was a problem [...]. I wish I was born 60 years ago (Dean, age 29, 2018).

Finally, Eleanor continued to suffer technological setbacks until she left the study due to illness in 2016. She used her computer at home regularly, however still felt she wasn't using it enough to build literacy skills, thus continued to lack confidence:

I always look at [the computer] every morning to see if I've got any messages, but that's the one downfall cos I don't use it enough, I don't know how to do it [...]. I think it's my age group (Eleanor, age 80, 2016).

Eleanor expressed a concern that there was a social expectation of a certain level of literacy, and she felt she wasn't reaching this, despite her regular use. In fact, her use barely differed to Cathy's use, however they expressed very different attitudes. Eleanor was a regular user of computers throughout her 12 years in the study. By 2016 she habitually used the computer every day to check her email, but still felt she lacked the knowledge, confidence and literacy to use computers and the internet in the manner she felt

others expected. This left her feeling apprehensive and – more worryingly – defeated, attributing her struggles to age. As such, she showed limited desire to seek opportunities to learn more about how the internet could benefit her, as she felt education was unavailable or irrelevant to her needs.

CONCLUSION

This study addressed two research questions, exploring the attitudinal discrepancies that exist within groups of individuals considered as ‘users’ and the implications these attitudes may have for obtaining and maintaining media literacy. By providing a qualitative and longitudinal exploration into how the same people responded to the changing technological landscape in the UK between 2005-2018, I identified an array of different attitudes and approaches to the adoption and use of new technology. The attitudes of participants often shaped how they developed their media literacy skills. These findings challenge current understandings of media literacy and illustrate the need to further examine the differences within groups of individuals usually included under the broad category of ‘users’.

Many participants responded enthusiastically to rapidly changing technology during this time, embracing the internet and incorporating it into their everyday lives. Even those who were less enthused

about it began to accept the internet as an important aspect of their day-to-day routine following growing social expectations of use from those around them. By 2018 no-one actively resisted or rejected the internet, with all remaining participants accessing and using it.

This study has uncovered that the term ‘use’ – employed so frequently in academic and industry discourse – can be highly presumptuous and sweeping, failing to account for nuances in behaviour and attitude. It is restrictive to consider individuals in terms of whether they are ‘users’ or ‘non-users’: all of this sample were ‘users’, however the individual participants showed considerably different attitudes and degrees of literacy regarding the internet.

Even when participants could be considered to be established, regular users (such as Eleanor), some still claimed to feel unconfident, excluded and nervous, to the point that they felt unable to seek help from others and thus could not positively develop media literacy. The fewer opportunities apprehensive participants had to diffuse feelings of exclusion and isolation in the earlier years of the study, the more they appeared to struggle in later years. Over time more participants seemed to develop an apprehensive outlook, and once they felt this way it was evidently difficult to overcome such apprehensions. This is a troublesome finding, underscoring how problematic

it is to assume that the acquisition of media literacy is a positive, linear process driven by use. Increased use over time does not automatically correlate with greater literacy or confidence, as numerous participants made steps forward only to be knocked further back.

In exploring the differences between ‘users’ this research has shown how much one individual can change their outlook over time as a result of social and technological changes, and incentivisation from family or workplaces. Numerous participants were not incentivised to adopt and use technology or build literacy. They thus felt apprehensive and lacked confidence in their use. This was problematic, as some participants ended the study feeling so despondent that they were decreasing their usage or even considering rejecting the internet overall, showing a dramatic loss – rather than increase – in literacy over time. This is crucial to highlight as the UK continues to incorporate the internet into everyday life, e-democracy is normalised, and it becomes increasingly difficult to complete day-to-day tasks without the internet.

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