

Fake news and critical literacy

An evidence review

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Overview

The concept of ‘fake news’ became topical during the US Elections in 2016, when news stories with little or no basis in fact spread rapidly on social media, causing some concern about their potential influence on the democratic process. Calls for action to halt the spread of fake news and help the public better assess the reliability of news sources have come from organisations including the Organisation for Economic Cooperation and Development (OECD) – Schleicher (as cited in Siddique, 2017); the National Cyber Security Centre – Chichester (as cited in Halliday, 2017); the House of Lords Select Committee on Communications (House of Lords, 2017); the House of Commons Culture, Media and Sport Committee (“‘Fake news’ inquiry launched – News from Parliament”, 2017) and the Children’s Commissioner (Longfield, 2017). Many highlight the responsibility of global media organisations to police the content they publish in the ‘post-truth’ era (e.g. Chichester, cited by Halliday, 2017) along with the need for children and young people to be taught ‘critical literacy’ skills suitable for the 21st century.

This literature review aims to provide a brief overview of research relating to critical literacy skills and teaching, and will inform a subsequent survey of UK teachers and pupils. We will specifically look at children and young people’s use of social media to access news, their ability to identify fake news and the skills taught in schools linked to this topic. Issues and concerns commonly voiced in relation to young people’s use of the internet, such as online safety and radicalisation, are beyond the scope of this review. We hope that the reviews and the surveys will provide an insight into the challenges and opportunities an increasing and urgent need for critical literacy has to offer literacy teaching and learning.

Key points

Definitions

- Fake news has been defined as “completely made up, manipulated to resemble credible journalism and attract maximum attention” (Hunt, 2016). The University of Western Ontario’s ‘deception detector’ (Rubin, 2017) describes ‘five types’ of fake news: intentionally deceptive, jokes taken at face value, large-scale hoaxes, slanted reporting of real facts, and stories where the truth is contentious.
- Good critical literacy skills have the potential to provide a strong foundation for identifying fake news. It is increasingly important the children develop effective critical literacy skills to allow them to navigate the digital age.

The extent of the problem

- Globally, one in three internet users were estimated to be under the age of 18 in 2017 (Livingstone, Carr and Byrne, 2015), and 12 to 15-year-olds spend more than 20 hours online in an average week (Growing Up Digital taskforce, 2017). Yet, the current computing curriculum does not address several key aspects of online life, including how to critique content and spot fake news (Children’s Commissioner for England, 2017).
- A UK survey found that 58% of 8 to 11-year-olds and 72% of 12 to 15-year-olds said they visited news sites or apps in 2016. Of these, just over one fifth believed all the

information they found there to be true. The percentage of 12 to 15-year-olds that believed this increased from 14% in 2015 to 20% in 2016 (Ofcom, 2016).

- A 2017 survey of UK adults found that only 4% of respondents were able to identify all three true news stories presented within a selection of six, and 49% thought at least one of the three fake news stories was true (Channel4.com, 2017).
- There is a need for children and young people's critical literacy skills to be updated for the digital age, including improving awareness of the methods and motivations behind fake news production (e.g. Leu et al., 2010, Wohlwend and Lewis, 2011; Holmes-Henderson, 2014; Polizzi, 2017).

Why fake news is a problem

- Concerns about fake news highlight the importance of equipping children and young people with critical thinking skills appropriate for the 21st century. For example, while researchers concluded that fake news was unlikely to have had a significant impact on the outcome of the 2016 US general election (Allcott and Gentzkow, 2017), academics and other commentators have suggested that deliberately misleading news stories have the potential to affect democracy – Lewandowsky (as cited in Gray, 2017) – as well as public confidence in evidence-based governance (Williamson, 2016) and trust in journalism (Saunders, 2017).

The school environment

- Schools are vital in supporting children and young people to discern truth effectively when searching for information and news online (e.g. Peters, 2017; Polizzi, 2017; Schleicher, cited in Siddique, 2017). Indeed, several experts recommend that critical digital literacy should be taught in schools as part of citizenship lessons and throughout the curriculum (e.g. Hinrichsen and Coombs, 2013; Holmes-Henderson, 2014; Schleicher, 2017).
- The primary school curriculum includes many foundational skills needed to develop critical literacy. The comprehension dimension of reading in particular prepares children to be critically literate. The secondary school curriculum features more specific skills needed to be critically literate and they are also reflected in GCSE requirements.
- Teacher training is central to the success of any plan to boost critical literacy.
- Plenty of practical guidance is available for teachers across subjects to support teaching critical literacy skills, and several frameworks have been created. Discussion, debate and dialogue in particular feature in many of the practical strategies for supporting critical literacy in the classroom (Comber, as cited in Bishop, 2014).
- It is important that critical literacy skills are also formally assessed. Assessment frameworks have been created, for example, in Australia and New Zealand. And the Organisation for Economic Cooperation and Development (OECD) announced plans to assess 15-year-olds' "global competency" skills in PISA tests from 2018.
- Strengthening the teaching of critical literacy skills in schools should take place within the context of appropriate action by the digital industry (Longfield, 2017).

Introduction

Due to the topical nature of fake news, there is a great deal of recent information to be found on the subject and related areas. The impact of fake news on public understanding of important issues and events, and its potential to undermine public confidence in journalism and to influence the democratic process, have come under increasing scrutiny during a period that, in the UK, included a referendum and an election. The topic features regularly in the media, and studies exploring the ability of children, young people and adults to identify fake news, and recommendations linked with their findings, are emerging.

One recent definition of the term suggests that “in its purest form [fake news is] completely made up, manipulated to resemble credible journalism and attract maximum attention and, with it, advertising revenue” (Hunt, 2016). Indeed, the ease with which the internet and social media allow information to be exchanged, and the opportunities for popular sites to be ‘monetised’ through advertising revenue, has removed many of the financial or regulatory barriers that print media may previously have posed to potential creators of fake news.

The use of “fake news” to describe material reported without basis in fact should be considered distinct from some of the other uses of the term, such as media produced with deliberate satirical and parodic intent (although public confusion between fabricated news, satire and fact has also caused concern [Woolf, 2017]). The term has also been appropriated by some US conservatives to describe “any reporting they don’t like” (Demlanyk, 2017). For example, a tweet from Donald Trump in February 2017 suggested “any negative polls are fake news” (Borchers, 2017) and Trump has even described entire news organisations, such as CNN, as “fake news” (Wemple, 2017).

Damian Collins, chair of the Culture, Media and Sport Committee’s 2017 inquiry into fake news, feels this to be a “pernicious” use of the term, stating: “We need to fight for a clear definition of fake news. This term should be restricted for news stories that are entirely fake” as this appropriation “...suggests that fake news is in the eye of the beholder, rather than being something that can be clearly defined” (as cited by Demlanyk, 2017). Some commentators have offered categorisations of ‘fake news’. The University of Western Ontario’s ‘deception detector’ (Rubin, 2017) describes ‘five types’:

- Intentionally deceptive (as in ‘The Pope has endorsed candidate Trump’)
- Jokes taken at face value (e.g. misunderstanding parody and satire)
- Large-scale hoaxes (such as the incorrect story that the founder of a beer company had made everyone in his home village a millionaire)
- Slanted reporting of real facts
- Stories where the truth is contentious

In a 2017 speech preceding the annual Global Education and Skills Forum, OECD Director Andreas Schleicher (as cited in Siddique, 2017) suggested:

“Distinguishing what is true from what is not true is a critical skill today.
Exposing fake news, even being aware that there is something like

fake news, that there is something that is written that is not necessarily true, that you have to question, think critically, that is very important. This is something we believe schools can do something about.”

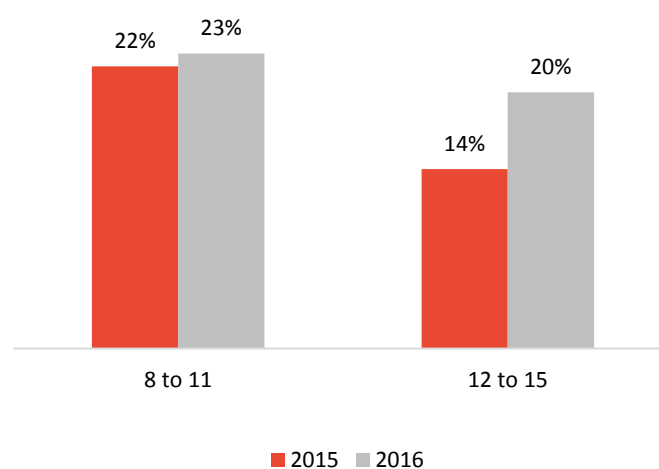
The Children’s Commissioner for England, Anne Longfield (as cited in Sky News, 2017), also believes that children “often lack the experience and understanding to be able to deal with the fake sites and fake news they see” and that they “need the skills to prepare them for the digital world” with “digital citizenship classes in schools” being one way to aid this preparation. As well as reinforcing that children’s schooling may aid students’ recognition of fake news (Children’s Commissioner for England, 2017), Longfield also emphasised the role of social media and other digital organisations, stating that we “need to see responsible behaviour from the digital industry”.

To summarise, the proliferation of fake news in recent times has caused considerable concern at a national and an international level, with academics, educationalists and policymakers calling for action to improve children and young people’s skills and confidence in identifying fake news.

Children and young people’s use of social media to access news

Children and young people’s news consumption patterns are an important point of reference when considering their potential exposure to fake news. A UK-based Ofcom survey in 2016 noted that 58% of 8 to 11-year-olds and 72% of 12 to 15-year-olds said they visited news sites or apps, and of these, just over one fifth believed all the information they found there to be true. The percentage of 12 to 15-year-olds that believed this increased from 14% in 2015 to 20% in 2016 (see Figure 1). This older age group were also more likely than children aged 8 to 11 to say that most of the information found on websites and apps was true (36% vs. 27%).

Figure 1: Percentage of UK children who use news sites or apps and believe “all information on them is true”



(Source: Ofcom, 2016)

These findings reversed a trend seen between 2013 and 2014, when the percentage of children in both age groups who believed all the information on news sites or apps was true had declined. While the 2014 report concluded that there had been “an increase in critical awareness of the truthfulness of online content” (Ofcom, 2014), the same could not be said for changes between 2014 and 2016, particularly for the older age group, for whom critical awareness appears to be in decline.

While the BBC website remained the preferred source of “true and accurate information about things that are going on in the world” for young people aged 12 to 15, the percentage who cited it as their “preferred source” decreased from 52% in 2015 to 35% in 2016, while the percentage who preferred using Google increased from 15% to 20% over the same period (Ofcom, 2016).

In addition, with regard to using the internet as a wider source of information, while around half of children who used search engines across the full age range surveyed (8 to 15) believed “some sites could not be trusted”, more than one in four agreed that “if Google lists information then the results can be trusted”. Indeed, qualitative research revealed that some children had a limited understanding of the source of search results, assuming an authoritative human fact checker was involved in their selection (Ofcom, 2016). The increasing number of young people choosing to use a search engine to find news may imply a greater need for knowledge and awareness about the ways in which search engines operate.

UK adults’ critical awareness fared little better in a Channel 4 survey of 1,684 people in 2017 (Channel4.com, 2017). The survey found that only 4% of respondents were able to identify all three true news stories in a selection of six they were presented with, and 49% of respondents thought at least one of the three fake news stories was true. A higher percentage of respondents who used Facebook as their primary news source (n = 101¹) believed at least one of the fake stories to be true, compared with those who primarily sourced their news from TV, radio or online broadcasters (71% vs. 47%).

More than half of those who took part in the survey felt the government wasn’t doing enough to address fake news, and more than two thirds thought social media sites needed to do more. Younger respondents were most likely to say they were worried about the effects of fake news and that more fact-checking sites were needed.

In terms of adult consumption of news via social media, a survey of more than 70,000 online news consumers in 36 countries conducted for the Reuters Institute for the Study of Journalism in early 2017 found that 41% of UK respondents said they used social media to access news. Researchers noted a “significant fall in those who agree that the news can be trusted (from 50% to 43% in the past 12 months) with under 35s particularly distrustful”. They suggested that “Much of this may be related to the use of social media where only 18% say [it] can be trusted to separate fact from fiction, compared with 41% for news brands” (Newman, 2017). The report’s authors also noted a significant generational split with regard to the use of social media to access news across all countries:

¹ 53% stated their primary sources of news was broadcast, 17% newspapers, 13% websites, 6% Facebook, 2% Twitter

“...younger groups are much more likely to use social media and digital media as their main source of news, while older groups cling to the habits they grew up with (TV, radio and print). A third of 18-24s (33%) now say social media are their main source of news – that’s more than online news sites (31%) and more than TV news and printed newspapers put together (29%)”.

Children and young people’s ability to identify fake news

In terms of children and young people’s skills and confidence around spotting fake news, while one survey of 1,503 UK teachers found that 35% “reported pupils citing clearly ‘fake news’ or false information online as fact within their work” (NASUWT, n.d.), it is difficult to find any large-scale UK studies exploring children and young people’s confidence and skills around the identification of fake news. A 2017 LSE study (Ho, Li, Marot-Achillas, Mortlock & Zeng, 2017) observed that “...the existing literature is primarily US based” and “current research does not target the consumption habits of young people in particular who receive the highest exposure to social media and hence fake news (Greenwood et al., 2016)”. They suggest that “Research that focuses specifically on the UK should be used to determine if such trends are present across borders” (Ho, Li, Marot-Achillas, Mortlock & Zeng, 2017).

One US study carried out by the Stanford History Education Group (2016) put forward the view that while “young people are fluent in social media” they were not “equally savvy about what they find there”. Another US survey of 853 children and young people aged 10 to 18 carried out in 2017 found that while 44% felt they knew how to tell fake and real news stories apart, 31% who’d shared a news story online in the previous six months later found it to be inaccurate (Common Sense Media, 2017). This shows little progress when compared with a 2007 US study by Leu et al. (2010) that found:

“47 out of 53 higher-performing online readers in seventh grade believed a site designed to be a hoax² was reliable... Despite that, most students indicated in an interview that they did not believe everything they read online. Moreover, when told the site was a hoax, a number of students insisted it provided accurate and reliable information.”

Critical digital literacy and pedagogy

There is some consensus that teachers are “ideally placed to help young people develop the critical thinking skills that allow them to question and determine the reliability of information they find on the internet” and that critical or digital literacy can be integrated into curriculum teaching, to be “developed alongside subject knowledge in all classrooms at both primary and secondary level” and addressed “...in their everyday practice” (Hague and Payton, 2010). In common with many other commentators, OECD Director Andreas Schleicher (as cited in Siddique, 2017) argued that teaching critical literacy is “...not a matter

² <http://zapatopi.net/treeoctopus>

of schools teaching a new subject, but of building skills to help discern the truth into all lessons, from science to history.”

There is also much agreement that teacher training is central to the success of any plan to boost critical literacy. Holmes-Henderson (2014) asserted that: “Learners in... the UK’s home nations deserve to be taught by teachers who feel confident and supported in their delivery of critical skills across the curriculum.” The 2016-17 Second Report to the House of Lords Select Committee on Communications recommended that “schools should teach online responsibilities, social norms and risks as part of mandatory Ofsted-inspected Personal, Social, Health and Economic (PSHE) education” and that “teachers should be adequately resourced and trained to deliver this, as well as incorporating digital literacy issues into teacher-training courses” (House of Lords, 2017).

However, Holmes-Henderson (2014) notes that while there is an “increasing use of the term ‘critical literacy’ in UK educational policy documents” the concept may be “poorly understood by teachers” (Reid, as cited in Holmes-Henderson, 2014). She suggests that the concept of ‘critical literacy’ encompasses a broad range of meanings. In a 2014 review, Holmes-Henderson describes it in terms of:

“A continuum of meaning... [from] the ability to discern persuasion in communication and interrogate issues of motivation and power in language [to]... the critical analysis of communication which motivates subsequent social or political action to redress inequalities and injustices.”

The socio-political concept of critical literacy may be traced back to Freire’s work in the late 1980s, such as Freire and Macedo (1987), which was further developed by academics such as Shor (1997), who stated:

“Essentially... critical literacy is language use that questions the social construction of the self. When we are critically literate, we examine our ongoing development, to reveal the subjective positions from which we make sense of the world and act in it.”

Luke (cited by Hawkins, 2013) notes the connections that may be made between critical, digital and media literacy:

“Practical approaches to critical literacy advocated in US schools... have also involved the development of a critical “media literacy” focusing on the analysis of popular cultural texts including advertising, news, broadcast media and the Internet (e.g. Alvermann & Hagood, 2000; Kellner & Share, 2005).”

Both Hinrichsen and Coombs (2013) and Holmes-Henderson (2014) suggest that Luke and Freebody’s ‘Four Resources’ model (1999), with its focus on processes rather than “syllabus specification” may provide a useful basis for curriculum integration. Holmes-Henderson recommended that Luke and Freebody’s model “(in which learners are taught [1] code breaking and [2] meaning making, to become [3] text users and [4] text analysts)” should be used for professional development. Hinrichsen and Coombs explained that the model

articulates each resource “...at a conceptual level based on ‘families of practice’ but does not detail specific competencies [as] these are seen to be areas for interpretation and management by the teacher”. They further advocated an expansion of the model to include a fifth resource of ‘Persona’ (see Figure 2), suggesting that “more conceptual digital literacy... signals an opportunity for a corresponding shift from a skills agenda to the idea of situated practices”.

Figure 2: The five resources model of critical digital literacy



(Source: Hinrichsen and Coombs (2013). The model, its elements and diagrams are licensed under a [Creative Commons Attribution-NonCommercial-NoDerivs 2.0 UK: England & Wales License](https://creativecommons.org/licenses/by-nc-nd/2.0/uk/))

Evolving definitions of critical literacy provide a context within which an understanding of critical literacy skills in the digital age may be better understood. Indeed, its influence may be seen in definitions of ‘digital literacy’. For example, one definition (Hague and Payton, 2010) states that digital literacy involves:

“...critically engaging with technology and developing a social awareness of how a number of factors including commercial agendas and cultural understandings can shape the ways in which technology is used to convey information and meaning”.

Hague and Payton’s 2010 model of the components of digital literacy (Figure 3) includes both ‘Critical thinking and evaluation’ and ‘Cultural and social understanding’ and they foreground the importance of linking critical thinking skills and digital literacy, specifically: “evaluating the views of others, and thinking critically about how those views and their own have been informed by social and cultural understandings”.

Figure 3: The components of digital literacy



(Source: Hague, C. and Payton, S., 2010)

The second report of the House of Lords Select Committee on Communications (House of Lords, 2017) refers to digital literacy in terms of “the skills and knowledge to critically understand the internet”, asserting that this should “...sit alongside reading, writing and mathematics as the fourth pillar of a child’s education”. The report also recommends that children are taught “critical thinking skills” including how to assess the veracity of online information. The variance in internet use and levels of “critical understanding” in children of different ages is also highlighted, with evidence suggesting that an ability to “separate what is real and unreal” occurs between the ages of six and 12, with children’s limited life experience presenting an “additional problem” for their ability to understand fake news (Dera.ioe.ac.uk, 2017). Indeed, life experience and exposure to different ways of thinking may be important factors influencing the ability to distinguish between credible and unreliable sources, independent of age, which are likely to be particularly important for younger children.

The increasing importance of developing critical literacy skills adapted for the digital age was described by Leu et al. (2010): “Whereas critical evaluation is important when reading offline information, it is perhaps more important online where anyone can publish anything; knowing the stance and bias of an author become paramount to comprehension and learning.” They advised:

“Determining this in online contexts requires new comprehension skills and strategies. For example, knowing which links take you to information about who created the information at a site (and actually choosing to follow these links) becomes important. So too is knowing how to check the reliability of information with other information at other sites. Students do not always possess these skills.”

Other commentators have argued that metacognition “facilitates a critical approach to different texts, and is an important aspect of critical literacies perspectives” (Olin-Scheller and Tengberg, 2017). Similarly, teaching metacognitive skills should not be considered a

stand-alone subject but as part of the process of teaching, and should therefore be part of all subjects and integrated into all lessons (e.g. Didau, 2013).

Some academics advocate for the socio-political aspects of critical literacy to be better considered in education. For example, Lankshear and McClaren (as cited in Bishop, 2014) explain that a “critical literacy approach” involves working with students “to understand the nature and implications of the ideologies on parade [in texts]; and in doing so engage students in reflection upon their own ideological investments”. Holmes-Henderson (2014) feels that the concept of critical literacy has been “diluted in policy” as it is “not associated anywhere in policy literature with transformation through individual or collective action”, thereby missing an important opportunity to link critical literacy learning with “responsible citizenship”.

Polizzi (2017) concurs: “Inasmuch as it should be approached as a lifelong set of abilities and predispositions, critical digital literacy should be pedagogically promoted in tandem with civic education, which is necessary for providing context around which the veracity of content can be more easily ascertained.” Suggesting that “Teaching critical digital literacy should imply educating users to appreciate what opportunities and risks digital media entail, focusing on their democratising potentials and political constraints,” he believes “it follows that teachers should be adequately trained to be able to deliver such a plan”.

To summarise, teacher training is central to the success of any plan to boost critical literacy skills, and there is agreement that these may be taught most effectively when integrated across the curriculum, and developed alongside subject knowledge in all lessons.

Practical guidance for teachers

Hague and Payton’s 2010 handbook for Futurelab, *Digital literacy across the curriculum*, acknowledges that while digital literacy is of increasing interest to researchers and policymakers, information for classroom practitioners is limited, particularly in terms of applying digital literacy strategies in subject-related teaching. As Luke (2013) observed: “While Freirian models provide a pedagogical approach and a political stance, an orientation towards ‘voice’ and ideology, they lack specificity in terms of how teachers and students can engage with the detailed and complex structures of texts, both traditional and multimodal.” Along with a rationale for developing digital literacy in the classroom, Hague and Payton’s handbook offers practical suggestions for schools and includes a discussion of continuing professional development and whole-school aspects of digital literacy.

McLaughlin and DeVogd (2004) suggested that two instructional frameworks are helpful for teaching students about critical literacy. The first is used to teach critical literacy strategies, and the second to teach critical literacy in lessons where students apply these strategies. These critical literacy strategies “which are dynamic and adapt to the contexts in which they are used, promote critical discussions based on reflection and resulting action that leads to more reflection and other resulting actions”. The purpose of these is to direct students as they engage in critical analysis and their role to critical literacy as reading comprehension strategies that support students’ understanding of text.

One of these strategy frameworks is the ‘guided comprehension five-step direct instruction process’ by McLaughlin & Allen (2002; as cited in McLaughlin & DeVogd, 2004). This strategies framework consists of strategies of explaining, demonstrating, guiding, practising and reflecting. Another example of a critical literacy strategy is problem posing where students use questions to engage in critical analysis (McLaughlin & DeVogd, 2004).

Buckingham (2007) also offers practical guidance for teachers. For example, he lists four ways how young people can be supported in relation to finding information on the internet: representation (e.g., how websites claim to tell the truth), language (e.g., the user-friendliness and interactivity of a website), production (e.g., how web articles are actually authored and who uses the web), and audience (e.g., who the website is aimed at and targeted advertising). Students need to be able to critically engage with the content and relate it to the subject knowledge they already have and are seeking to develop. This means that instructing students simply to check information they find from three independent sources, as many teachers suggest, is not enough (Hague & Payton, 2010).

Comber (as cited in Bishop, 2014) says that discussion, debate and dialogue feature in many of the practical strategies and techniques suggested for developing and supporting critical literacy in the classroom. Temple (2010) describes a ‘Socratic seminar’ model that encourages children to “build on (rather than compete with) each other[’s ideas] to reach a mutually constructed and deeper understanding of an issue”, and a form of questioning that encourages this. He provides an example of classroom practice that illustrates how a teacher encourages critical thinking after sharing a familiar fairytale (*Beauty and the Beast*) by asking questions with a “critical attitude”; treating meaning-making as a social activity and allowing children to question, doubt and follow up their ideas. With non-fiction, questions might include: *What are we learning from this that we didn’t know before? Is this argument convincing? What other points of view have we learned about? Is there more to be said about this topic? Do we think this is true? How do we know?*

Discussion is an essential part of the Economist Education Foundation’s Burnet News Club (BNC), an initiative designed to teach 8 to 16-year-olds “the critical thinking skills needed to navigate the news”. Pupils taking part in the programme in UK schools can learn about and debate the news via an online hub. The charity advises teachers to ensure children have access to good-quality age-appropriate information and to offer children safe opportunities to discuss the issues peer to peer, whether online or offline. This can be done with other local schools or between classes. They also suggest inviting expert speakers to take part. Young people taking part in the programme develop “skills of logic, curiosity, negotiation, storytelling and a healthy scepticism” (Palmer, 2017).

A similar approach has been created by Kathy Schrock (2017) in her “Five W’s of website evaluation”, which advises teachers to help pupils evaluate website content by questioning “who, what, when, where and why”. A similar question-based approach was created by librarians at California State University (CSU, 2010) who developed the CRAAP test, which helps students determine if their sources of information are accurate and reliable. The questions are categorised under the headings of ‘currency’ (the timeliness of the information), ‘relevance’ (the importance of the information for your needs), ‘authority’

(the source of the information), 'accuracy' (the reliability, truthfulness, and correctness of the informational content) and 'purpose' (the reason the information exists; CSU, 2010).

However, while such an approach appears to be a useful tool for teachers across subjects, Shenton (2017) warns that young people might apply the frameworks mechanically in all situations. For example, he suggests that while pupils should usually seek content free of bias, occasionally "they may be looking into the arguments of a particular pressure group and in formation preaching a certain viewpoint may be welcomed". Alternatively, they might be seeking inaccurate information if they are trying to determine the prevalence of a misconception (Shenton, 2017). Shenton (2017) also highlights that the skill of comparing material from different sources is still important in exposing "fake news". He suggests that the key task for teachers is to use their preferred framework for evaluating information in relevant modern contexts and devise activities that engage young people on several levels.

Casey Medlock Paul (2016) suggests that teaching critical literacy in the middle-school (equivalent of KS3 in the UK) classroom starts with the teachers adopting a critical lens. This should be done by teachers asking themselves critical questions about the texts used in their lessons and lessons overall. This is followed by changing their perceptions of middle-school students and "by refusing to view adolescence as a clearly defined developmental stage, teachers can embrace the complexity of this stage and begin to redress how they might dialogue with their students". This is an interesting perspective as many other strategies tend to focus on teachers directly providing tools for their students, rather than emphasising the importance of teachers' views as well.

How does critical literacy correlate with the curriculum at KS2, KS3 and KS4? When and where are the skills taught?

On a practical level, Holmes-Henderson (2014) suggests that "learners aged 5-19 need to become equipped with appropriate tools and techniques to enable them to discern truth from rhetorical manipulation" and be given "knowledge and techniques to help them to make informed and ethical judgements", including "opportunities to listen, critique, analyse and compose". As the previous section suggests, teaching critical literacy should be integrated within the whole curriculum and starts with teacher training. Building on that, this section explores where the skills are currently taught within the curriculum.

Primary schools

The primary school curriculum³ includes several skills that are needed for critical literacy. While the curriculum does not specifically address critical literacy, many of the components included can be seen as the foundation skills. Overall, of the two dimensions of reading taught at Key Stages 1 and 2 (word reading and comprehension), comprehension in particular prepares children to be critically literate.

Some skills more specifically tapping into being able to spot fake news and be critical about texts encountered are also included in the curriculum. The following areas that support the foundation skill in developing critical literacy were identified in the primary school

³ Link to the curriculum

curriculum:

- Encouragement of a wide range of reading materials for different purposes
- Discussion of texts and response to texts
- Teaching of inference – reasoned justification of views
- Identification of how language structure and presentation contribute to meaning
- Recognising the difference between fact and opinion (Y5/6)
- Discussion and evaluation of how authors use language to impact on a reader

Secondary schools

Evidently, teaching critical literacy in secondary school is based on the foundation skills learned in primary school, and the secondary school curriculum also continues to support skills needed for critical literacy. For example, pupils should be taught to make inferences, further develop their comprehension skills in general and use discussion in order to learn.

In addition to building on the skills learned in primary schools, critical literacy skills feature more specifically in the secondary school curriculum⁴. At Key Stage 3 it is a specific requirement to teach pupils to read critically, such as by making critical comparisons across texts. At Key Stage 4, pupils are to be taught to understand and critically evaluate texts through “seeking evidence in the text to support a point of view, including justifying inferences with evidence”, “distinguishing between statements that are supported by evidence and those that are not, and identifying bias and misuse of evidence” and through “analysing a writer’s choice of vocabulary, form, grammatical and structural features, and evaluating their effectiveness and impact”.

In addition to these specific skills outlined in the English section of the curriculum, several other areas of the secondary school curriculum also support the development of critical literacy. For example, history education aims to ensure that pupils know how “to ask perceptive questions, think critically, weigh evidence, sift arguments, and develop perspective and judgement”. Similarly, teaching citizenship “should equip pupils with the skills and knowledge to explore political and social issues critically, to weigh evidence, debate and make reasoned arguments”. One of the overall aims of the programme of study is to ensure that pupils are equipped with the skills to think critically. At Key Stage 3, pupils should “use and apply their knowledge and understanding while developing skills to research and interrogate evidence, debate and evaluate viewpoints, present reasoned arguments and take informed action”, while at Key Stage 4 they should “develop their skills to be able to use a range of research strategies, weigh up evidence, make persuasive arguments and substantiate their conclusions”.

Furthermore, the National Curriculum also states that schools must make provision for PSHE. While the areas of study have not been specified, many of the topics suggested by the PSHE Association (2017) tap into critical literacy and being able to spot fake news. Most significantly for critical literacy, one of the overarching concepts of the programme of study – power – includes issues such as how power is used and encountered in various contexts

⁴ Link to the curriculum

(including online). In a similar vein, the essential skills developed through the programme of study include “discernment in evaluating the arguments and opinions of others” and “recognising, evaluating and utilising strategies for managing influence”.

These requirements are also reflected in GCSE requirements. The GCSE subject criteria for English states that specifications for English must enable learners to “become critical readers of a range of texts, including multimodal texts” (Ofqual, 2015). In addition, the specifications must require learners to “form independent views and challenge what is heard or read on the grounds of reason, evidence or argument” and to “evaluate the ways in which texts may be interpreted differently according to the perspective of the reader” (Ofqual, 2015).

At sixth form, students can choose subjects such as psychology, sociology and philosophy, some of which may facilitate the development of critical literacy. In addition, subjects like media studies should provide students with “rich and challenging opportunities for interpretation and in-depth critical analysis” and the chance to consider media products “in the light of the contexts in which they are produced and received” (AQA, 2016). However, these subjects are not available in all schools, so focusing on them to be the place in the curriculum to support students’ critical literacy development does not benefit all students.

Critical literacy assessment

Holmes-Henderson (2014) notes that critical skills (i.e. critical literacy and critical/creative thinking) are “deemed so important that they will be formally assessed” in Victoria (Australia) and that “tests... measure learners’ critical awareness and reasoning skills, independent of subject content”. She observes: “Without some method of formal assessment, will critical skills ever attract importance from teachers and learners?” In a similar vein, when it comes to assessment practices, how and what is assessed send a strong message about what is valued in education (Stiggings, 1991, as cited in Sandretto & Klenner, 2011, p. 112).

While the need for assessing critical literacy is clear, how to assess these skills on a practical level is not as straightforward. For example, Sandretto & Klenner (2011) discuss the challenges for teachers working with a broader conceptualisation of literacy that includes critical literacy as they can no longer rely on traditional tools of assessment. For example, how should one assess pupils’ ability to critically analyse several texts for a variety of purposes when there is no single correct answer? (Sandretto & Klenner, 2011.)

From a theoretical perspective, assessment practices follow from the theories of learning. Sandretto & Klenner (2011) discuss first-generation (assessing what is taught), second-generation (assessing learning as individual sense-making) and third-generation (assessing learning as building knowledge as part of doing things with others) assessment practices and highlight that the practice depends on the purpose of the assessment.

An example of a new way of assessing critical literacy comes from Holmes-Henderson (2014). She describes how the Victorian state contracted the Australian Council for Educational Research (ACER) to create assessments to test pupils on nine ‘general’

capabilities, one of which is ‘critical and creative thinking’. The ACER developed 31 “items which can be used to test critical and creative thinking”, require no content knowledge and are not subject specific. The tests allow for “summative and diagnostic feedback” but were only at the pilot stage at the time of Holmes-Henderson’s study.

Another example of ways to assess critical literacy was developed by the Critical Literacy Research Team (CLRT; Sandretto & Klenner, 2011) in New Zealand. The critical literacy rubric was defined as a tool for assessment and covers assessment design, purpose, task development, level of performance and expectations (Sandretto & Klenner, 2011). The tool has been found to be flexible and has potential “to measure how students applied critical literacy strategies to a particular text, or to measure their understanding of critical literacy terms and concepts more generally” (Sandretto & Klenner, 2011). It has also been suggested that the tool can be used for self-assessment (Sandretto & Klenner, 2011). It is possible that these types of frameworks could be used more universally when adapted to different contexts.

Notably, the Organisation for Economic Cooperation and Development (OECD) announced plans to assess 15-year-olds’ “global competency” skills as part of the Programme for International Student Assessment (PISA) tests from 2018. The organisation states that the “components of knowledge, understanding and critical thinking are strongly interrelated components that students need to use simultaneously to approach intercultural and global problems” (OECD, 2016). Therefore the 2018 assessment:

“...aims to build a single scale that measures to what extent students are able to use their knowledge and understand, recognise relationships and perspectives, and think critically about a specific global or intercultural issue”.

The wider picture: the impact of ‘fake news’ on democracy, rights and society

The importance of helping children and young people to become digitally critically literate has been presented as one of the five rights of the 5Rights framework⁵ (n.d.), which asserts:

Young people... should have the chance to learn about the realities of the digital world, with a grasp of the underlying motivations of actors in digital spaces, and the ability to manage new social norms and their own reputation online. It must be right that children and young people learn how to be... intelligent consumers, to critically understand the structures and syntax of the digital world, and to be confident in managing new social norms.

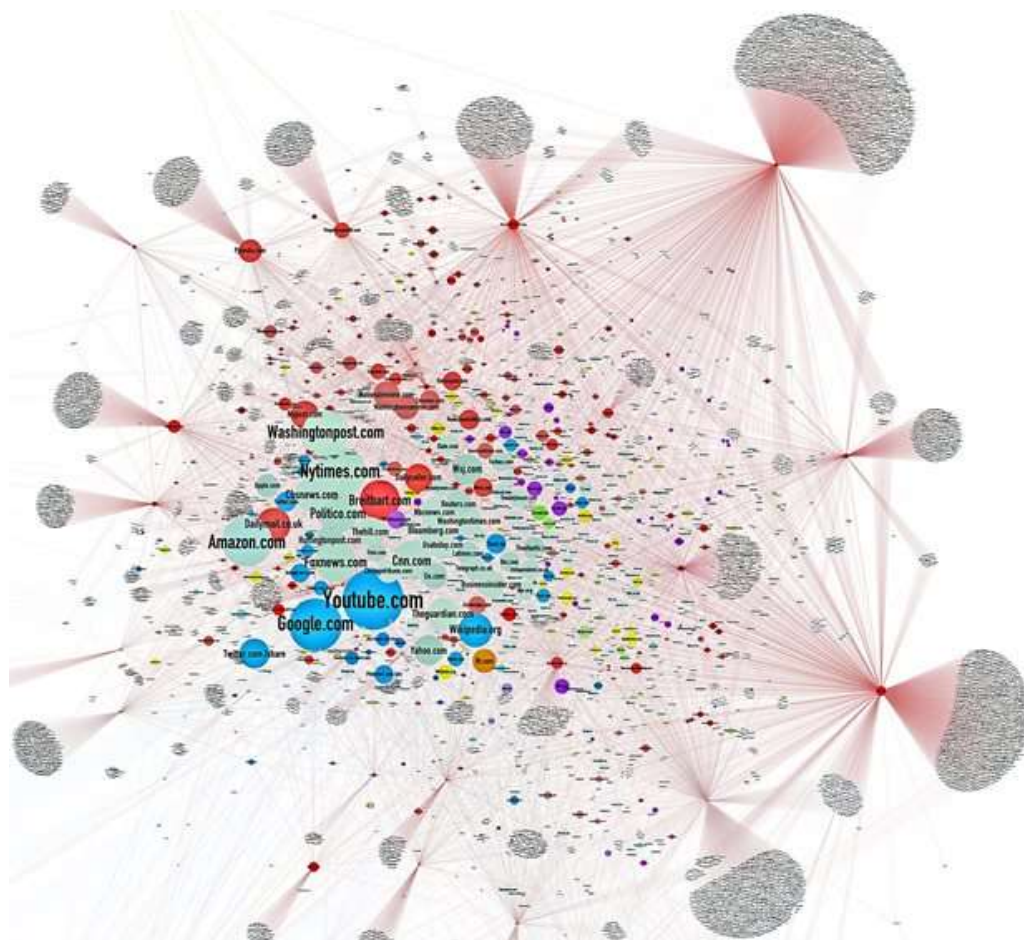
For example (without going into what would be a much wider exploration of the causes of fake news), the relationship between advertising revenue and fake news would be a

⁵ <http://5rightsframework.com/the-5-rights/the-right-to-digital-literacy.html>

valuable part of any exploration of critical digital literacy in the classroom, particularly for older students. A 2011 review by Wohlwend and Lewis notes Burbules and Callister (2000) and Fabos (2004, 2008) arguing for “...careful, critical readings of Internet sites and texts that uncover the politics of representation and commercial sponsorship”. The proliferation of ‘clickbait’ sites during the 2016 US election was also covered widely in the media (e.g. Tynan, 2017). However, Polizzi (2017) argues that “Critical digital literacy... shouldn’t be just about understanding Internet-related economic issues, but about critically reflecting on the extent to which these issues have repercussions for society.”

In addition to the potential economic motivators behind the spread of fake news, the political motivations of those groups seeking to infiltrate search engine results with fake news may also be an important consideration. For example, Albright (2016) argues that right-wing groups have developed ways to influence search engine results, increasing the likelihood of fake news results being suggested. As part of a study of the sources of fake news, he produced a diagram showing a “micro-propaganda” network of 117 “fake news’, viral, anti-science, hoax and misinformation websites” and their links to more popular and well-known websites (see Figure 4).

Figure 4: Graphic mapping the ‘right-wing fake news ecosystem’



(Source: Albright, J., 2016)

The impact of fake news on the democratic process has been a prominent topic in recent years, particularly in 2016 with the UK referendum on membership of the European Union

and the US election. A well-known example of ‘fake news’ preceding the UK referendum was a claim made by the Vote Leave campaign that the UK paid £350 million per week to the EU, which they further suggested could be used by the NHS. A poll carried out by Ipsos MORI just prior to the referendum found that, of the 78% of respondents who had heard the statement, 47% believed the claim to be true (Ipsos MORI, 2016), despite it having been refuted by the UK Statistics Authority (chair Sir Andrew Dilnot said the figure was “misleading and undermines trust in official statistics”) and the independent Institute for Fiscal Studies (Stone, 2016).

With regard to the 2016 US election, one American survey found that a significant percentage of the electorate struggled to distinguish between real and fake news, with a September 2016 poll of 1,224 voters finding that 73% of Trump supporters believed a fake news story implying that George Soros had paid protesters to disrupt rallies (Jensen, 2016). However, another US study concluded that the spread of fake news in the run up to the election was unlikely to have influenced the result. Indeed, Allcott and Gentzkow (2017) concluded:

“For fake news to have changed the outcome of the election, a single fake news story would need to have convinced about 0.7 percent of Clinton voters and non-voters who saw it to shift their votes to Trump, a persuasion rate equivalent to seeing 36 television campaign ads.”

Goodman (2017) surveyed other European governmental approaches to fake news, particularly where elections were due. In the Czech Republic, a specialised analytical and communications unit has been set up by the government ahead of an October general election to assess whether any ‘disinformation’ had the potential to affect ‘internal security’, and publish facts and data to disprove it if so. Goodman noted an increase in fake news relating to refugees in Germany, and a German politician’s suggestion that fake news sites should be criminalised due to their impact on the “fabric of the state”.

Other academics have expressed concerns about the more insidious influences of fake news on the democratic process. Stephan Lewandowsky (as cited in Gray, 2017) suggests that algorithmically selected news sources may have greater capacity to reinforce existing prejudices, claiming: “There is a large proportion of the population in the US living in what we would regard as an alternative reality. They share things with each other that are completely false.” This may be one aspect of a phenomenon often referred to in terms of an ‘echo chamber’ effect, in which algorithms present individuals with news items most likely to appeal to them.

Professor Michael Peters also expressed concerns about the impact of poor critical literacy on democracy in a 2017 editorial entitled *Education in a Post-Truth World* (Peters, 2017). In his opinion: “Criticality has been avoided or limited within education and substituted by narrow conceptions of standards, and state-mandated instrumental and utilitarian pedagogies.” He also suggests:

“If education is equated almost solely with job training rather than a broader critical citizenship agenda for participatory democracy, we can expect the further decline of social democracy and the rise of populist demagogue politicians and alt-right racist parties.”

Professor Lynch (as cited by Tavernise, 2016) has shared concerns that any increased perception that “nobody knows what’s really true” may have the effect of reducing trust in accurately reported news.

Organisational responses

The opportunity to ensure children and young people are equipped with the critical digital literacy skills needed to navigate online news sources should be developed with an awareness of actions being taken by other agencies to address the proliferation of fake news. In the UK, a House of Commons Culture, Media and Sport Committee inquiry into ‘fake news’ was launched in early 2017. It aimed to consider:

- The impact of fake news on public understanding and trust in journalism
- Any associations between personal characteristics such as age, gender and socio-economic background and response to fake news
- Any differences in other countries’ responses to fake news given UK traditions such as public-service broadcasting
- Any links between advertising revenue and the growth of fake news
- The responsibilities of search engines and social media platforms
- How best to educate people in assessing the reliability of news (Commons Select Committee, 2017)

At the launch of the inquiry, Committee Chair MP Damian Collins (as cited in Brinkhurst-Cuff, 2017) stated: “The growing phenomenon of fake news is a threat to democracy and undermines confidence in the media in general,” asserting that “consumers should... be given new tools to help them assess the origin and likely veracity of news stories they read online”. The inquiry was put on hold prior to the general election of May 2017 and has since concluded (“Fake news’ inquiry launched – News from Parliament”, 2017).

Goodman’s 2017 survey of European governmental approaches to fake news found that Italy’s ‘antitrust chief’, Giovanni Pitruzella, advocated for EU member states to establish a network of public agencies to deal with fake news, rather than leaving regulation to private companies. She further suggested that while “Increased digital media literacy would effectively nullify many of the risks of fake news without a need for restrictive legislation... achieving this is a huge challenge with no clear response.”

Other commentators have suggested that the picture in the UK is slightly different due to its ‘highly partisan’ newspapers, which one commentator suggested “...has left a limited gap for fake news providers. Instead, traditional publishers have grown more reliant on Facebook shares for internet traffic and advertising income, ratcheting up the shock value of headlines to meet demand” (Waterson, 2017).

Nevertheless, several organisational responses to the threat of fake news may be observed in the UK. For example, the Chartered Institute of Library and Information Professionals

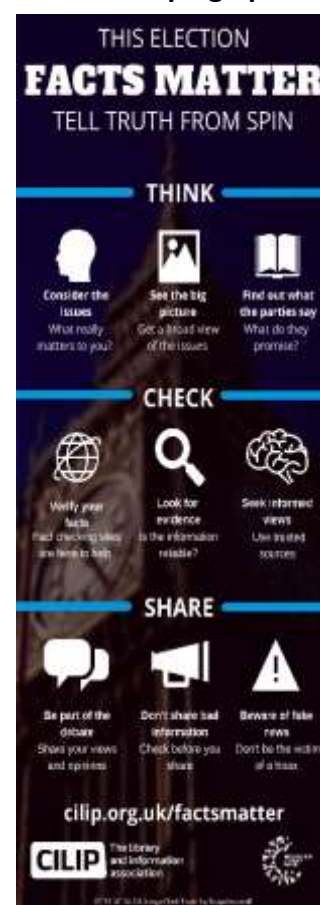
(CILIP) launched the #Facts Matter campaign in early May 2017 as a response to the snap UK general election. The campaign called on all political parties to run evidence-based campaigns and aimed to “develop partnerships with other organisations involved in the fight to promote evidence as an essential requirement of a strong democracy” and produced an infographic with the CILIP Information Literacy Group (see Figure 6). Nick Poole, CILIP chief executive, said: “The general election is the biggest decision the UK will make this year and previous elections and referenda have clearly shown the urgent need for reliable facts in the political debate” (cited by Onwuemezi, 2017).

In early 2017, several academic and university presses, such as Columbia, De Gruyter, Harvard and Princeton, formed a joint initiative to provide free information on issues including climate change, ethics, immigration and Islamic studies (Bookseller). In terms of responses by social media and internet organisations, Goodman (2017) lists some of the voluntary measures already taken by Facebook to improve their news feed algorithm’s ability to identify ‘authentic’ content, giving US readers the opportunity to flag stories they consider fake news and working with third-party fact-checking organisations. She feels that “Encouraging Facebook and others to flag stories of potentially suspect origin seems to be the most likely course of action that the CMS Committee might recommend” as “...although this would allow social media companies to have a say in what is true and what is not, it would ultimately leave the public to decide”. Facebook is also working with the BBC, who have made their ‘reality check’ feature permanent⁶.

Facebook and Google were also reported to have been removing fake news sites from their advertising platforms on the grounds that they violated policies against misleading content (Wingfield, Isaac, and Benner 2016). Google is reported to have a policy prohibiting sites with misleading content and regularly bans fake news publishers, including those that impersonate news sites, from their AdSense network. It is also working with fact-checking organisations (Gray, 2017), which are increasing in number across Europe (Goodman, 2017). Google and YouTube were also reported to be running ‘Internet Citizens’ workshops, which aimed to “teach young people how to use tools for flagging content and comment moderation, so as to better help them tackle some of the challenges of online platforms” (Simon-Lewis, 2017).

In addition, the co-founder of Wikipedia, Jimmy Wales, launched a crowd-funded online news site, WikiTribune⁷, with the aim of mounting a challenge to fake news by combining professional journalism and community collaborators fact-checking published articles. Along with the BBC’s ‘reality check’, there are many other fact-checking services available to those seeking to verify the veracity of any news item. One of these, Full Fact, is developing

Figure 6: Cilip Facts Matter campaign poster



⁶ <http://www.bbc.co.uk/news/topics/267ada11-b730-4344-b404-63067c032c65/reality-check>
⁷⁷ <https://www.wikitribune.com/>

an automated fact-checker that will be able to monitor claims made on the internet, in newspapers, in Parliament and on TV (Gray, 2017).

Facebook has published ads in partnership with Full Fact offering ‘Tips for spotting false news’ (see Figure 7). It has been pointed out that the ads may not have been run in some UK newspapers with larger readerships (Lomas, 2017).

Other commentators recommend including an awareness of the ‘ecology’ of digital media in teaching. Polizzi (2017) states: “Teaching critical digital literacy should imply educating users to appreciate what opportunities and risks digital media entail, focusing on their democratising potentials and political constraints.” Polizzi also says:

“Fact-checking skills are crucial to assessing content reliability and will only be truly effective when they are enhanced by an awareness of digital media’s limitations in relation, for instance, to content fragmentation, polarisation and trustworthiness.”

Figure 7: Facebook and Full Fact Tips advertisement



Prior to this, a resource that Melissa Zimdars of Merrimack College put together for students in her media class in 2016 entitled “False, Misleading, Clickbait-y, and/or Satirical ‘News’ Sources” became one of the first popular sources of tips for academics and others. The resource includes a list of sites categorised as “bias, conspiracy, fake, hate, political, satire, unreliable” (Zimdars, 2016).

Other commentators have also advocated a ‘name and shame’ approach of producing a website, listing journalists, publications, news channels and other websites alongside any public complaints and evidence linked to them, and including a kitemark or ratings angle to “police truthfulness” (Mulgan, 2017). French newspaper company *Le Monde* has developed a database of fake news sites and an accompanying tool that allows readers to verify if a URL is reliable (Davies, 2017).

IBM developed an app capable of scanning the language used on a page and presenting an internet user with a percentage likelihood of whether a story is true. However, Ben Fletcher, the engineer who developed the system, found that in tests many users weren’t interested in whether a story was true or not, explaining: “At the heart of what they want, was actually the ability to see all sides and make the decision for themselves” (as cited in Gray, 2017). Lewandowsky (as cited in Gray, 2017) suggests this presents a potential solution, in that search-engine algorithms could be formulated to deliver results that include information “that may subtly conflict with a user’s world view”. He further proposes that: “By suggesting

things to people that are outside their comfort zone, but not so far outside they would never look at it, you can keep people from self-radicalising in these bubbles. I think we have to work on that.”

To summarise, it may be argued that it is essential to ensure children and young people are given the opportunity to develop the appropriate critical digital literacy skills to equip them to navigate online news sites effectively. These should be developed alongside efforts by policymakers, commercial and non-commercial organisations to raise awareness of the nature and impact of fake news.

Discussion

Children and young people using the internet today need to learn far more than basic ICT skills (Eurodigiwiki.org.uk, n.d.). An awareness of how to stay safe online and manage privacy sits alongside developing confidence, creativity and critical digital literacy. Recent concerns about the spread of fake news have led to calls for action from policymakers, educators and media organisations. An approach based on increasing regulation presents ethical and technological challenges, however, and commentators have equally questioned whether the responsibility for controlling fake news can, or indeed should, be addressed entirely by voluntary actions and initiatives developed by commercial organisations that might then “by default become ‘arbiters’ of the truth” (Goodman, 2017).

It would seem that a little time should be given for voluntary initiatives to emerge and take effect before a regulatory option is more thoroughly explored. It is within this context that children and young people’s critical literacy skills must be strengthened and updated (where necessary) to provide them with the tools they need to engage effectively with information they find online.

There is some consensus that teachers are well placed to do this, and that the most effective models of critical literacy may first be taught within citizenship or similar lessons, but should then be applied across the curriculum. Holmes-Henderson (2014) advocates the involvement of UK subject associations (such as the National Association for the Teaching of English, The Association for Language Learning and The Association for Citizenship Teaching) in producing support materials and resources that integrate critical literacy with subject content. She further advises: “School leaders should prioritise critical literacy in whole-school development plans. Only with consistent prioritisation will critical literacy become embedded in UK classroom practice.”

There is also a need for a UK-based survey of children and young people’s feelings about – and ability to identify – fake news. This should allow for a timely and valuable exploration of any associations that may be found between age, gender, social background and exposure to, and ability to identify, fake news.

References

Allbright, J. (2016, November 18). The #Election2016 Micro-Propaganda Machine. [Blog post]. Retrieved from <https://medium.com/@d1gi/the-election2016-micro-propaganda-machine-383449cc1fba>

Allcott, H., & Gentzkow, M. (2017). Social Media and Fake News in the 2016 Election. *Journal of Economic Perspectives*, 31(2), 211-236.

Alvermann, D.E., & Hagood, M.C. (2000). Critical media literacy: Research, theory, and practice in "New Times". *The Journal of Educational Research*, 93(3), 193-205. Retrieved July 5, 2017, from https://www.researchgate.net/profile/Donna_Alvermann2/publication/249037634_Critical_Media_Literacy_Research_Theory_and_Practice_in_New_Times/links/53d4674e0cf220632f3d0c9e.pdf

AQA (2017). A-level media studies. Retrieved from <http://filestore.aqa.org.uk/resources/media-studies/specifications/AQA-7572-SP-2017.PDF>

Baker, T. (2017, February 2017). Fake news: What is it, and how can we tackle it? [Blog Post]. Retrieved from <https://digitalsocial.eu/blog/58/fake-news-what-is-it-and-how-can-we-tackle-it> [Accessed 5 Jun. 2017].

Becta (2010). Digital Literacy: Teaching critical thinking for our digital world [PDF file]. Coventry, England: Becta. Retrieved from <http://itte.org.uk/wp/wp-content/uploads/2016/04/Digital-Literacy-Becta.pdf>

Bishop, E. (2014). Critical Literacy: Bringing Theory to Praxis. *Journal of Curriculum Theorizing* 30(1), 51-63. Retrieved July 6, 2017, from <http://journal.jctonline.org/index.php/jct/article/view/457/pdf>

Borchers, C. (2017, February 9). 'Fake news' has now lost all meaning. *The Washington Post*. Retrieved from https://www.washingtonpost.com/news/the-fix/wp/2017/02/09/fake-news-has-now-lost-all-meaning/?utm_term=.a54d422ceba1

Brinkhurst-Cuff, C. (2017, January 29). MPs to investigate threat to democracy from 'fake news'. *The Guardian*. Retrieved from <https://www.theguardian.com/media/2017/jan/29/fake-news-mps-investigate-threat-democracy>

Buckingham, D. (2007). *Beyond Technology: Children's Learning in the Age of Digital Culture*. Cambridge: Polity Press.

Burbules, N., & Callister, T. Jr. (2000). *Watch IT: The Promises and Risk of New Information Technologies for Education*. CO: Westview Press.

California State University (2010). *Evaluating Information – Applying the CRAAP Test*. Retrieved from August 17, 2017 from https://www.csuchico.edu/lins/handouts/eval_websites.pdf

Channel4.com. (2017, February 6). C4 study reveals only 4% surveyed can identify true or fake news. *Channel 4 News*. Retrieved July 6, 2017, from <http://www.channel4.com/info/press/news/c4-study-reveals-only-4-surveyed-can-identify-true-or-fake-news>.

Children's Commissioner for England (2017). *Growing Up Digital: A Report of the Growing Up Digital Taskforce*. London, England: Children's Commissioner for England.

Common Sense Media (2017, March 8). News and America's Kids: How Young People Perceive and Are Impacted by the News. *Common Sense Media*. Retrieved from <https://www.commonsensemedia.org/research/news-and-americas-kids>

Commons Select Committee (2017). *'Fake news' inquiry launched*. London, England: Author.
Demlanyk, G. (2017). UK Politicians Call 'Fake News' On Stories They Don't Like, Aping Donald Trump | HuffPost UK. Retrieved 14 July 2017, from http://www.huffingtonpost.co.uk/entry/british-politicians-fake-news_uk_58b60832e4b0a8a9b7870126

Davies, J. (2017). Le Monde identifies 600 unreliable websites in fake-news crackdown – Digiday. Digiday. Retrieved 6 July 2017, from <https://digiday.com/uk/le-monde-identifies-600-unreliable-websites-fake-news-crackdown/>

Didau, D. (2013, June 1). What is meta-cognition and can we teach it? *The Learning Spy*. Retrieved from <http://www.learningspy.co.uk/featured/what-is-meta-cognition-and-can-we-teach-it/>

Eurodigiwiki.org (n.d.). From internet users to digital citizens – WS 06 2017 - EuroDIG Wiki. (n.d.). Retrieved 6 July 2017, from https://eurodigwiki.org/wiki/From_internet_users_to_digital_citizens_%E2%80%93_WS_06_2017

Fabos, B. (2004). *Wrong turn on the information superhighway: Education and commercialization of the Internet*. NY: Columbia University Teachers College Press.

Fabos, B. (2008). The price of information: Critical literacy, education and today's Internet. In D.J. Leu, J. Coiro, M. Knobel, & C. Lankshear (Eds.), *Handbook of research on new literacies*, 839-870. NJ: Erlbaum.

Freebody, P., & Luke, A. (1990). Literacies programs: Debates and demands in cultural context. *Prospect: An Australian Journal of TESOL*, 5(3), 7-16.

Freire, P., & Macedo, D. (1987). *Literacy: Reading the Word and the World*. Great Britain: Routledge and Kegan Paul Ltd.

Goodman, E. (2017, February 17). How has media policy responded to fake news? [Blog post]. Retrieved from <http://blogs.lse.ac.uk/mediapolicyproject/2017/02/07/how-has-media-policy-responded-to-fake-news/>

Gray, R. (2017, March 1). Lies, propaganda and fake news: A challenge for our age. *BBC Future*. Retrieved July 6, 2017, from <http://www.bbc.com/future/story/20170301-lies-propaganda-and-fake-news-a-grand-challenge-of-our-age>

Hague, C., & Payton, S. (2010). Digital literacy across the curriculum [PDF file]. Bristol, England: Futurelab. Retrieved July 5, 2017, from <https://www.nfer.ac.uk/publications/FUTL06/FUTL06.pdf>

Halliday, J. (2017, March 14). Facebook and Twitter should do more to combat fake news, says GCHQ. *The Guardian*. Retrieved from <https://www.theguardian.com/media/2017/mar/14/facebook-twitter-gchq-combat-fake-news>

Hinrichsen, J., & Coombs, A. (2013). The five resources of critical digital literacy: a framework for curriculum integration. *Research in Learning Technology*, 21(1). DOI: 10.3402/rlt.v21.21334

Ho, R., Li, X., Marot-Achillas, T., Mortlock, C., & Zeng, H. (2017). Group 9: The Truth Behind Fake News Insights into the perceived trustworthiness of news and its link to policy decision. London: LSE. Retrieved from <http://www.lse.ac.uk/intranet/LSEServices/TLC/Research-informed-education-and-LSE-GROUPS/2017-papers/Group-9---The-Truth-Behind-Fake-News.pdf>

Holmes-Henderson, A. (2014). *Reading between the lines: Improving the UK's critical literacy education* [PDF file]. New Zealand: Winston Churchill Memorial Trust.

House of Lords (2017). *Growing up with the Internet* [PDF file]. Westminster, London: Authority of the House of Lords. Retrieved from http://www.ictliteracy.info/rf.pdf/Growing_up_with_the_Internet.pdf

Hunt, E. (2016, December 17). What is fake news? How to spot it and what you can do to stop it. *The Guardian*. Retrieved from <https://www.theguardian.com/media/2016/dec/18/what-is-fake-news-pizzagate>

Ipsos MORI, (2016). Immigration is now the top issue for voters in the EU referendum. Retrieved 14 July 2017, from https://www.ipsos.com/ipsos-mori/en-uk/immigration-now-top-issue-voters-eu-referendum?language_content_entity=en-uk

Jensen, T. (2016, December 9). Trump Remains Unpopular; Voters Prefer Obama on SCOTUS Pick [Blog post]. Retrieved from <http://www.publicpolicypolling.com/main/2016/12/trump-remains-unpopular-voters-prefer-obama-on-scotus-pick.html>

Judd, T., & Kennedy, G. (2011). Measurement and evidence of computer-based task switching and multitasking by 'Net Generation' students. *Computers & Education*, 56(3), 625-631.

Kellner, D., & Share, J. (2005). Toward critical media literacy: Core concepts, debates, organizations and policy. *Discourse: Studies in the Cultural Politics of Education*, 26(3), 369–386

Lankshear, C., & McLaren, P. (1993). *Critical literacy: politics, praxis, and the postmodern*. Albany, NY: State University of New York Press.

Leu, D., Coiro, J., Castek, J., Hartman, D.K., Henry, L.A., & Reinking, D. (2010). Research on Instruction and Assessment in the New Literacies of Online Reading Comprehension. In C. C. Block & S. Parris (Eds), *Comprehension instruction: Research-based best practices*. NY: Guilford Press.

Livingstone, S., Carr, J. and Byrne, J. (2015). One in Three: Internet Governance and Children's Rights. Innocenti Discussion Paper No.2016-01, UNICEF Office of Research, Florence. Page 15

Livingstone, S., & Olafsson, K. (2017, May 25). Children's commercial media literacy: new evidence relevant to UK policy decisions regarding the GDPR [Blog post]. Retrieved from <http://blogs.lse.ac.uk/mediapolicyproject/2017/01/26/childrens-commercial-media-literacy-new-evidence-relevant-to-uk-policy-decisions-regarding-the-gdpr/>

Lomas, N. (2017, May 8). *Facebook culls "tens of thousands" of fake accounts ahead of UK election*. Retrieved July 7, 2017, from <https://techcrunch.com/2017/05/08/facebook-culls-tens-of-thousands-of-fake-accounts-ahead-of-uk-election/>

Longfield (2017). *Growing Up Digital. A Report of the Growing Up Digital Taskforce*. London, England: Children's Commissioner for England.

Luke, A., & Freebody, P. (1999). A map of possible practices: Further notes on the four resources model. *Practically Primary*, 4(2), 5-8.

Luke, A. (2013). Regrounding Critical Literacy: Representation, Facts and Reality. In M.R. Hawkins (Eds.), *Framing Languages and Literacies: Socially Situated Views and Perspectives* (pp 136-149). NY: Routledge.

McLaughlin, M., & DeVogd, G. (2004). *Critical Literacy: Enhancing Students' Comprehension of Text*. New York: Scholastic.

Medlock, P. C. (2016). Integrating Critical Literacy in the Middle School Classroom. *Middle Grades Review*, 2(2). Retrieved from: <http://scholarworks.uvm.edu/cgi/viewcontent.cgi?article=1050&context=mgreview>

Mulgan, G. (2017). Truth and the media: a modest proposal | Nesta. Nesta.org.uk. Retrieved 6 July 2017, from <http://www.nesta.org.uk/blog/truth-and-media-modest-proposal>

NASUWT. (201). Schools failing to protect teachers from online abuse. Retrieved 14 July 2017, from <http://www.nasuwat.org.uk/article-listing/schools-failing-to-protect-teachers-online-abuse.html>

Newman, N., Fletcher, R., Kalogeropoulos, A., Levy, D., & Nielsen, R. (2017). Reuters Institute Digital News Report 2017. Retrieved from: https://reutersinstitute.politics.ox.ac.uk/sites/default/files/Digital%20News%20Report%202017%20web_0.pdf?utm_source=digitalnewsreport.org&utm_medium=referral

OECD (2016). Global competency for an inclusive world [PDF file]. Paris, France: OECD Secretary General. Retrieved from <https://www.oecd.org/education/Global-competency-for-an-inclusive-world.pdf>

Ofcom (2014). Children and Parents: Media Use and Attitudes Report [PDF file]. Southwark, London: Ofcom. Retrieved from https://www.ofcom.org.uk/__data/assets/pdf_file/0027/76266/childrens_2014_report.pdf

Ofcom (2016). Children and parents: media use and attitudes report [PDF file]. Southwark, London: Ofcom. Retrieved from https://www.ofcom.org.uk/__data/assets/pdf_file/0034/93976/Children-Parents-Media-Use-Attitudes-Report-2016.pdf

Ofqual (2015). GCSE Subject Criteria for English. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/446026/gcse-subject-criteria-for-english.pdf

Olin-Scheller, C., & Tengberg, M. (2017). Teaching and learning critical literacy at secondary school. The importance of metacognition. *Language and Education, 0(0)*, 1-14. Doi: <http://dx.doi.org/10.1080/09500782.2017.1305394>. Retrieved from <http://www.tandfonline.com/doi/abs/10.1080/09500782.2017.1305394>

Onwuemezi, N. (2017, May 10). Wikipedia founder joins CILIP's fight against 'fake news'. *The Bookseller*. Retrieved from <http://www.thebookseller.com/news/wikipedia-founder-joins-cilips-fight-against-fake-news-549651>

Palmer, (2017). Read all about it! How to get students discussing current affairs | Teacher Network | The Guardian. (n.d.). Retrieved 17 August 2017, from <https://www.theguardian.com/teacher-network/2017/mar/24/read-all-about-it-how-to-get-students-discussing-current-affairs>

Peters, M. (2017). Education in a post-truth world. *Educational Philosophy and Theory, 49(6)*, 563-566.

Polizzi, G. (2017, May 22). Tackling fake news: towards a new approach to digital literacy [Blog post]. LSE Media Policy Project Blog. Retrieved from <http://blogs.lse.ac.uk/mediapolicyproject/2017/05/22/tackling-fake-news-towards-a-new-approach-to-digital-literacy/>

Poole, N. (2017, April 21). CILIP announces “Facts Matter” campaign for 2017 General Election. *CILIP*. Retrieved from <https://www.cilip.org.uk/news/cilip-announces-facts-matter-campaign-2017-general-election>

PSHE Association (2017). PSHE education programme of study: key stages 1-5. Retrieved from https://www.pshe-association.org.uk/sites/default/files/PSHE%20Education%20Programme%20of%20Study%20%28Key%20stage%201-5%29%20Jan%202017_2.pdf

Reuters Institute for the Study of Journalism (2016). Reuters Institute Digital News Report 2016 [PDF file]. Oxford, England: Reuters Institute for the Study of Journalism. Retrieved from <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/Digital-News-Report-2016.pdf>

Rubin, V. L. (2017). Deception Detection and Rumor Debunking for Social Media. In L. Sloan, & A. Quan-Haase (Eds.). *The SAGE Handbook of Social Media Research Methods*, London: SAGE.

Sandretto, S., & Klenner, S. (2011). *Planting seeds: Embedding critical literacy into your classroom programme*. New Zealand: NZCER Press.

Saunders, K. (2017, April 24). Future of Journalism: The Guardian's contribution to MPs' inquiry into fake news. *The Guardian*. Retrieved from <https://membership.theguardian.com/membership-content?referringContent=membership/2017/apr/24/fake-news-guardian-mps-inquiry&membershipAccess=MembersOnly>

Schrock, K. (2017). The Five W's of Web Site Evaluation. *Kathy Schrock's Guide to Everything*. Retrieved from <http://www.schrockguide.net/critical-evaluation.html>

Shenton, A. (2017). ‘Fake News’ Is An Old Story, But Today’s Students Might Need Different Skills To Spot It. (n.d.). Retrieved 17 August 2017, from <http://www.teachwire.net/news/fake-news-is-an-old-story-but-todays-students-might-need-different-skills-t>

Shor, I. (1999). What Is Critical Literacy? [PDF file]. NY: CUNY Publishing Institute. Retrieved from <http://mediaeducation.org.mt/wp-content/uploads/2013/05/What-is-Critical-Literacy.pdf>

Siddique, H. (2017, 18 March). Teach schoolchildren how to spot fake news, says OECD. *The Guardian*. Retrieved from <https://www.theguardian.com/media/2017/mar/18/teach-schoolchildren-spot-fake-news-says-oecd>

Simon-Lewis, A. (2017). YouTube is going to teach teens how to spot fake news by running workshops. WIRED UK. Retrieved 6 July 2017, from <http://www.wired.co.uk/article/youtube-internet-citizens-google>

Sky News. (2017, 18 March). Children 'should be taught' to spot fake news. *Sky News*. Retrieved from <http://news.sky.com/story/teach-pupils-to-spot-fake-news-says-education-expert-10805731>

Stanford History Education Group (2016). Evaluating Information: The Cornerstone of Civic Online Reasoning [PDF file]. CA: Author. Retrieved from <https://sheg.stanford.edu/upload/V3LessonPlans/Executive%20Summary%2011.21.16.pdf>

Stone, J. (2016, June 16). Nearly half of Britons believe Vote Leave's false '£350 million a week to the EU' claim | The Independent. Retrieved 14 July 2017, from <http://www.independent.co.uk/news/uk/politics/nearly-half-of-britons-believe-vote-leaves-false-350-million-a-week-to-the-eu-claim-a7085016.html>

Tambini, D. (2017). Fake news: public policy responses [PDF file]. London, England: LSE Media Policy Project. Retrieved from http://eprints.lse.ac.uk/73015/1/LSE%20MPP%20Policy%20Brief%2020%20-%20Fake%20news_final.pdf

Tavernise, S. (2016). As Fake News Spreads Lies, More Readers Shrug at the Truth. *New York Times*. Retrieved from https://www.nytimes.com/2016/12/06/us/fake-news-partisan-republican-democrat.html?_r=1

Temple, C. (2010). Critical Thinking and Critical Literacy. In P. Temple, D. Ogle, A. Crawford, & P. Freppon, (Ed.), *All children read: Teaching for literacy in today's diverse classrooms* (2nd ed.). Boston: Pearson Education Incorporation.

Tynan, D. (2016, August 24). How Facebook powers money machines for obscure political 'news' sites. *The Guardian*. Retrieved from <https://www.theguardian.com/technology/2016/aug/24/facebook-clickbait-political-news-sites-us-election-trump>

Waterson, J. (2017, January 24). Britain Has No Fake News Industry Because Our Partisan Newspapers Already Do That Job. *BuzzFeed*. Retrieved from <https://www.buzzfeed.com/jimwaterson/fake-news-sites-cant-compete-with-britains-partisan-newspape>

Wemple, E. (2017, May 2). No, Trump campaign. You don't get to call CNN 'fake news' on CNN. *The Washington Post*. Retrieved from https://www.washingtonpost.com/blogs/erik-wemple/wp/2017/05/02/no-trump-campaign-you-dont-get-to-call-cnn-fake-news-on-cnn/?utm_term=.c2272c736602

Williamson, P. (2016). Take the time and effort to correct misinformation. *Nature*, 540(7632), 171-171.

Wingfield, N., Isaac, M., & Benner, K. (2016, November 14). Google and Facebook Take Aim at Fake News Sites – *The New York Times*. Retrieved 17 August 2017, from <https://www.nytimes.com/2016/11/15/technology/google-will-ban-websites-that-host-fake-news-from-using-its-ad-service.html>

Wohlwend, K. E., & Lewis, C. (2011). Critical literacy, critical engagement, and digital technology: Convergence and embodiment in global spheres. In D. Lapp & D. Fisher (Eds.), *Handbook of Research on Teaching English Language Arts* (3rd ed., pp. 188-194). NJ: Lawrence Erlbaum.

Woolf, N. (2017, November 17). As fake news takes over Facebook feeds, many are taking satire as fact. *The Guardian*. Retrieved from <https://www.theguardian.com/media/2016/nov/17/facebook-fake-news-satire>

Zimdars, M. False, Misleading, Clickbait-y, and Satirical “News” Sources. Google Docs. Retrieved 17 August 2017, from https://docs.google.com/document/d/10eA5-mCZLSS4MQY5QGb5ewC3VAL6pLkT53V_81ZyitM/preview