

***News literacy and fake news curriculum:
School librarians' perceptions of pedagogical practices***

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ABSTRACT

The high profile of fake news reveals underlying trends in the production and consumption of news. While news literacy is a lifelong skill, the logical time to start teaching such literacy is in K-12 educational settings, so that all people have the opportunity to learn and practice news literacy. School librarians can play a critical role in helping students gain news literacy competence. This study investigated the needs for K-12 students to be news literate and their current level of skills as perceived by in-service teachers and school librarians in California. Respondents thought that their students were most competent at distinguishing advertisements and least proficient at discerning the trustworthiness of photographs. Concurrently, news literacy was seldom integrated systematically into the curriculum. The findings supported the need for developing news media literacy curriculum, including visual and media literacy, that could be implemented by K-12 teachers and school librarians.

Keywords: *fake news, news literacy, media literacy, curriculum, school libraries.*

INTRODUCTION

As the recent American presidential race made abundantly clear, news might not be as true as it appears. At the same time, mass media play an increasingly significant role in today's society. Even when one is not searching for information, mass media permeate everyone's environment, influencing individual world views and decision-making. Therefore, people need to consciously and critically analyze and evaluate mass media messages and, only then, decide how to respond. Otherwise, they will not make reasoned decisions, and they will suffer the consequences of their assumptions or ignorance. They must be news literate.

While news literacy is a lifelong skill, the logical time to start teaching such literacy is in K-12 educational settings, so that all people have the opportunity to learn and practice news literacy. The age to begin such instruction varies with some asserting that students as young as kindergarteners can analyze news (Moore, 2013; Share, 2015).

This study investigated the needs for K-12 students to be news literate and their current level of skills as perceived by in-service teachers and school librarians. The findings inform the development of news media literacy curriculum that can be implemented by K-12 teachers and school librarians.

NEED FOR NEWS LITERACY

Changes in the News

The issue of news literacy has become critical nowadays. A recent *The Atlantic* article suggests several reasons why (Thompson, 2016). People have put less trust in mainstream news outlets and other public institutions as they have dramatized or hidden certain perspectives. As news media outlets increasingly communicate their messages to narrow target audiences, thanks to hundreds of cable television channels that are less regulated than basic access channels, people can stay in their information "comfort zones" and "filter bubbles" and not consider different points of view. It is increasingly easy to stay in this filter bubble due to the advent of social media. Social networks allow everyday people the ability to contribute to the news cycle, spreading content in real-time with virtually no vetting, monitoring, or editorial review. Furthermore, with less gatekeeping, low overhead costs, and instant broadcasting ability, social media give mainstream news outlets a competitive run for their money.

Timelines becomes more critical, and partisanship can attract a greater audience, jeopardizing traditional news verification and in-depth analysis. The result is an overwhelming amount of news with which to contend – and less control over its quality.

Fake News

This daunting situation is further exacerbated by the increasing frequency and sophistication of fake news. In its basic form, fake news is deliberate, publicly published disinformation/hoax/lie purported to be real news and published by established mass media or social media. News may be faked by lies, doctored content (e.g., photo editing, misleading statistics), content that is misleading or taken out of context, counterfeit sources, and false attributions. Fake news is considered to be one type of misinformation and may be created for several reasons: to mislead, for fun, out of passion or strong belief, to gain power or influence, or to get richer.

EAVI, a European commission for media literacy, identified several types of misleading news (EAVI, 2017). Occasionally, media creators make honest mistakes that could hurt a person or organization; normally, the creator retracts that mistake and apologizes. *Clickbait* refers to eye-catching headlines and images that use deception to get online users to click on the hyperlink; the actual news may contradict the headline or image (e.g., terms such as "shocking" or "looming", provocative images). Systematic information campaigns, such as *propaganda*, may be used by governments to mislead and manipulate people's knowledge, attitudes, or values (e.g., "Buy war bonds," "Stop smoking"). Content is sometimes *sponsored* and published as an advertisement that mimics editorial or news content; however, the information may signal a conflict of interest with the news outlet. *Partisan* content reflects ideological interpretation that usually uses emotional language; it may purport to be impartial (e.g., Tea Party or oil industry). *Satire* is social commentary that typically uses irony, absurdity or humor (e.g., The Daily Show, Mad Magazine). *Pseudoscience* refers to misleading or misrepresented scientific studies with exaggerated or false claims (e.g., snake oil or climate change denial). *Conspiracy theories* explain a complex reality that provokes fear and rejects experts and refutations, which may be interpreted as evidence that the conspiracy is real (e.g., Kennedy assassination or Twin Towers conspiracies).

Kaplan (2017) explained ways that misinformation can be “weaponized” into fake news. Misleading or information taken out of context can be used to support lies. Satire, propaganda, clickbait, and conspiracy theories can all include lies and yet be presented as a legitimate news story.

Fake news per se is not a new phenomenon – with language comes truth and lies. News, then, reflects both possibilities. Each “new” mass media technology – be it the printing press, radio, television or the Internet – has come with the potential for fake news. Stories of exotic travels have been fabricated for centuries. The stock exchange has suffered because of fake news. The Jewish people have often been the victims of fake news, such as drinking blood and murdering children (Soll, 2016). The critical difference about contemporary fake news is its much expanded and timely distribution via the Internet, which then can lead to its greater influence. And, fake news is unlikely to go away. Fake news has been the catalyst for political manipulation, the rise in diseases because of the anti-vaccination movement, and killings as witnessed in South Sudan (Berman, 2017; Gyenes & Mina, 2018; Lynch, 2018). When people believe fake news, they are misinformed and may make poor decisions (Berman, 2017). When people do not know what to believe, they may become frustrated, polarized, confused, fearful, distrustful, cynical, and withdrawn. None of this helps society make wise decisions or solve social issues.

So, why do people believe in fake news and pass it on? The same motivations that drive people to create fake news can apply to those who believe and share it. In some cases, people lack the background knowledge or logical skills to discern the veracity of the information. However, part of the reason for believing fake news lies in the human brain (Sharot, 2017). Psychologically, news is easier to accept if it confirms a person’s existing knowledge base. If the news differs from one’s current experience, but it is what one *wants* to believe, then it is more likely to be accepted, according to Sharot. For instance, if people hear that poverty will end in ten years, most of them would probably like to believe that news. The opposite is equally true; if it is bad news or news that contradicts strongly held beliefs, then it is likely to be discounted – even if sound evidence is behind it. Furthermore, cable television channels are not required by the Federal Communications Commission (FCC) to provide balanced news coverage as is required for public broadcast television such as ABC, CBS and NBC. The

result is an increasingly narrow casting of news where individuals can listen to news outlets that just reinforce their own existing beliefs; they do not have to be exposed to opposing points of view – or their favorite news outlets will give convincing arguments against unpleasant news (Parsons, 2003). For instance, a far-left contingency who read *Progressive* will find many claims about the evil of President Donald Trump. This phenomenon is called a “filter bubble” or “echo chamber” (Pariser, 2011).

Additionally, when people share news, they are more likely to share news that confirms their pre-existing beliefs. Social media enables them to broadcast that news – fake or real – more widely and quickly than ever before. While such sharing tends to be sent to friends (e.g., Facebook followers), that news might also be sent to opponents to counter their arguments or picked up by X, depending on the privacy setting of the posting. Sharot (2017) suggested that to counter fake news, people can first acknowledge and respect the person who has a different point of view and not attack his or her belief system. Then, they can reframe that fake news in such a way that common ground can be found in order to improve the situation. Sharot noted that it takes both parties to be respectful; otherwise, it is better to walk away than to engage in an emotionally charged fight that will further polarize both parties.

Students’ News Information Behavior

Youth are likely to get most of their news online or through social satirical comedy television (e.g., *The Daily Show*) rather than official news outlets. Furthermore, today’s youth have a growing distrust in mainstream politics, and are the least likely generation to exercise their voting rights (Matsa, Mitchell & Gottfried, 2015). Many young people are dissatisfied with conventional politics and government; they do not like negative campaigns and think that most politicians ignore them (Bennett, 2008).

These predispositions do not aid in youth’s discernment of fake news. More fundamentally, even though teens tend to feel comfortable in the mass media world, they often have poor evaluation skills (Stanford History Education Group, 2016). Furthermore, youth tend to generalize the quality of new sources rather than compare one news source with another to validate information, and they prefer looking at just a few specific sites based on what they consider good authority (e.g., Wikipedia) rather than search for a variety of perspectives (Eysenbach, 2008).

Particularly in the social media arena, youth are not just passing on or commenting on existing news and other information, but they are also generating knowledge (Bennett, 2008). Bennett also asserted that teen online discussion forums tend to assert personal opinions more than promote respectful and deep deliberation. Such practices can result in a greater spread of fake news rather than its containment. For instance, a popular, influential teen might voice what he thinks is the right point of view in a tweet, and his many followers might retweet his opinion, even if it is inaccurate.

Librarians' Roles

Librarians play significant roles in the information society. They provide physical and intellectual access to information for their communities, and school librarians have a mission to help their school community members to be effective users of information and ideas (American Association of School Librarians, 2009).

At the same time that librarians advocate for freedom of speech, they also think that disinformation “thwarts the development of an informed citizenry” (American Library Association, 2017, para. 1). In its 2017 resolution on access to accurate information, The American Library Association (ALA) encouraged librarians “to help raise public consciousness regarding the many ways in which disinformation and media manipulation are used to mislead the public” and supported “the critical role of librarians and library workers in all types of libraries in teaching information literacy skills that enable users to locate information and evaluate its accuracy” (para. 1)

Several articles have focused on school librarians' involvement in news literacy. The September 2018 issue of *Knowledge Quest*, titled “Fighting Fake News,” suggested several tools and resources for school librarians to use to combat disinformation. The issue editors asserted that school librarians are well qualified to help students discern the validity and accuracy of news and lead the school community in helping students to gain competencies in several types of literacies: numeracy, visual literacy, media literacy, as well as information literacy. The latter literacy, information literacy, may be defined as the ability to locate, access, evaluate, use, organize, share and create information responsibly (American Association of School Librarians, 2009). Similarly, in *School Library Journal*, Linda Jacobson (2017) asserted that school librarians are the most prepared members of the school community to address news because of their expertise in information

literacy, and she mentioned several efforts that school librarians have made to combat fake news through teaching news literacy.

NEWS LITERACY

Elements of News Literacy

News literacy involves accessing, understanding, evaluating, and interpreting news messages. It may be considered a subset of media literacy. What then is “media literacy”? The National Association of Media Literacy Education (2019) defines media literacy as “the ability to access, analyze, evaluate, create, and act using all forms of communication” (para. 1). In the United States, media literacy generally focuses on the idea of mass media – its purposeful means and production ends. Media in this context refers to information developed by the mass market producers, including social media developers, done for profit, influence, or power as its main objectives. In this respect, mass media can include periodicals as well as broadcasts, film, and video. Mass media often incorporates images, sounds, and actions. Especially because mass media has an agenda such as persuading the audience to buy their product or support their cause, the audience needs to be aware of their purposes to decide how to process and respond.

The Center for Media Literacy (CML) (Jolls, 2015) developed core concepts related to media messages; students need to consider the process by which the message is made, the message's content and framework, and the intent of the message. The CML further asserts that media have embedded values and perspectives and are experienced uniquely by each person. Drawing upon those media message concepts, news is particularly salient because there is often a perception that news is accurate and trustworthy – an assumption that has been challenged. Media literacy fits well under the umbrella of information literacy, and news provides concrete experienced information that can be evaluated in terms of its content and its creator intent (Kahne, Lee, & Feezell, 2012).

News Literacy Education

In advocating for media literacy education, the National Association for Media Literacy Education (Bergsma et al., 2007) identified six core principles for such education: 1) active inquiry and critical thinking about media, 2) need to address all forms of media, 3) reinforcement of lifelong skills, 4) development of civic

engagement, 5) media as part of culture and a socialization agent, and 6) individual construction of meaning from media messages.

In her paper on news literacy, Hobbs (2010) recommended that news literacy educators should start with current news that interests learners. Close reading should be introduced to enable learners to better understand and analyze/critique. Learners should discuss news using critical questions. Learners should know how news is constructed and link it with analysis. Learners should work with a variety of media and connect their school experience with community issues.

Silverblatt, Ferry & Finan (1999) suggested five approaches to teach media literacy: 1) ideological analysis based on cultural studies, 2) autobiographical analysis, 3) nonverbal analysis (paralanguage), 4) mythic analysis (allegories and belief systems), and 5) analysis of production elements such as visual principles and editing practices.

Stony Brook College's Center for News Literacy offers the most well-known news literacy curriculum. The main learning outcomes include the ability to access, evaluate, analyze, and appreciate news. The curriculum teaches the following concepts: the power of reliable information and the free flow of information, the mission of the press and its relation to government, how journalists work and make decisions, the impact of digital revolution and news media structural changes on news consumptions, news and reader responsibilities and why news and its literacy matters. The curriculum units include: distinguishing between journalism and other information providers, distinguishing between news and opinion, distinguishing between assertion versus verification, distinguishing between evidence and inference, deconstructing news based on evidence and source reliability, and distinguishing between news media bias and audience bias.

School Librarians' Perceptions of News Literacy

Ostensibly, school librarians deal with news literacy as part of their missions to help students become effective users of information. In this era of disinformation, what are school librarians' own perceptions about fake news and their perceptions about students' news literacy? Furthermore, what actions are school librarians taking to address fake news?

To answer these questions, the author investigated the perceptions and practices of California school librarians relative to fake news. Specifically, she surveyed this population about their knowledge of fake

news, their perceptions of the current level of middle and high school students' news literacy, their perception of needed student news literacy skills, and their current efforts to improve students' news literacy. This project contributes to the field in that it informs school librarians about news literacy and provides them with curriculum to help middle and high school students learn news literacy concepts and skills.

METHODOLOGY

A survey was used to collect perception information. The instrument itself is based on Stanford's validated questionnaire (Wineberg & McGrew, 2017) and was adapted editorially to address an adult audience rather than students (i.e., replacing "you" with "students"). The initial survey was pilot-tested with a district school librarian and was then modified very slightly for clarification.

The population to survey, K-12 school librarians, was chosen because they work with all students and faculty across the curriculum. More than any other school staff person, school librarians are likely to know students' assignments, information behaviors, and the resources that students regularly consult. In observing students' behaviors and working with the school community, school librarians are likely to be the most knowledgeable about students' news literacy and the academic efforts to teach improved news literacy.

One district's school librarians served as a district-specific population because the district's library services have a positive reputation within the state. This district serves over 72,000 students in 85 schools – in one of the most diversity large cities in the country. Every middle and high school in the district has a credentialed school librarian, and Title I elementary schools are also served by a credentialed school librarian. The school district was also chosen to optimize response rate and to determine the possible variance in responses within one large diverse district. A California-wide effort to solicit school librarians was made to compare responses and determine possible generalizability.

Subjects were recruited via email through the district library services listserv and through CalibK12 (calibk12@googlegroups.com), which is an online email-based Google group that serves as a discussion forum for California school librarians. Users of this Google group do not have to belong to any organization. Subjects agreed to the information consent statement and completed the online 15-question survey in about

ten minutes. The complete survey is available in Appendix A.

The instrument asked survey participants to define “fake news” in order to discern their immediate perceptions and understandings of the term, which might color their responses about related lessons and curricula that they provided as part of follow-up open-ended questions. Participants were also asked the open-ended question “What information and skills should students have relative to fake news?” to elicit their immediate ties between their understanding of fake news and students’ needed understanding of fake news.

In the instrument, participants were asked their perceptions about students’ knowledge about fake news in terms of specific news literacy tasks. These platform-neutral tasks for middle schoolers consisted of determining the trustworthiness of a Twitter tweet, questioning the relative reliability of commercial and newspaper comment posts, distinguishing between a news article and an opinion column, and identifying advertising on a news website. For high schoolers, the tasks consisted of comparing newspaper comment sections, comparing two Facebook exchanges, determining a website’s trustworthiness, determining the trustworthiness of a photo posted on a photo-sharing website, and questioning the relative reliability of a sponsored post and a newspaper story.

These tasks were directly quoted from the Stanford questionnaire given to middle and high school students (Wineburg & McGrew, 2017). To develop the questions, the researchers developed a bank of assessments to measure students’ civic online reasoning (based on best practices), then mapped the domain of civic online reason to identify three core competency constructs: 1) the group or individual behind the information, 2) the evidence presented, and 3) competing sources. They then developed and tested prototype tasks to measure the constructs in terms of their goodness-of-fit for cognitive validity. They did not design the tasks for specific grade levels but rather to match middle school students’ and high school students’ ranges of online reasoning abilities. In that respect of range, this study also asked about middle or high school status rather than specific grade level.

FINDINGS

41 school librarians completed the survey: two in elementary schools, two in K-8 schools, 15 in middle schools, and 22 in high schools. Of the 41 respondents, 31 worked in the one targeted school district. The rest of

the respondents worked in other school districts in California. The number of respondents lessened the probability that a significant difference would exist between the responses from the one district and the rest of the state; indeed, they were in sync. However, the low response from the rest of the state limits any generalizability of the findings.

The definitions of fake news by the respondents did not differ significantly by school level or district. About half of the school librarian respondents’ definition of fake news aligned with the study’s definition. Another third defined fake news as “misleading news.” Six defined fake news as being “unverified news,” two defined fake news as “deceptive news,” and two stated that they had not heard of the term until President Donald Trump became highly profiled.

The ratings were given points along a Likert ordinal scale as follows: not well at all = 1, slightly well = 2, moderately well = 3, and very well = 4. The ratings for each item were averaged for middle school, high school, and the total 39 respondents.

The two elementary school responses were omitted as the tasks were designated for middle and high school students. The Likert scale means were used to determine relative rankings, that is, among the news literacy tasks, which ones were students more adept at doing. Table 1 reports the respondents’ perceptions of their students’ degrees of news literacy for identified tasks.

According to the librarians’ perceptions, the easiest task for both middle and high school students was identifying ads on news websites. The following list ranks the students’ relative degree of competence for each news task, with determining a photograph’s trustworthiness as being the task that the students had the most difficulty doing.

1. Identifying ads
2. Distinguishing between news and opinion
3. Comparing news comments
4. Identifying trusted websites
5. Determining suitability of a news comment for research
6. Considering the relative strength of evidence of Facebook postings
7. Determining the trustworthiness of a tweet
8. Explaining why sponsored content might not be reliable
9. Distinguishing news versus sponsored content
10. Determining the trustworthiness of a photograph

Table 1. Respondents' perceptions of students' degrees of news literacy

Tasks	Frequency x Competency level			Mean		
	Middle School Librarians	High School Librarians	MS	HS	Merge	
Tweet trustworthiness	0x4 + 1x3 + 12x2 + 4x1	0x4 + 5x3 + 9x2 + 8x1	1.82	1.86	1.85	
Sponsor reliability	0x4 + 0x3 + 12x2 + 5x1	0x4 + 4x3 + 10x2 + 8x1	1.71	1.82	1.77	
News comment for research	0x4 + 1x3 + 12x2 + 4x1	0x4 + 4x3 + 12x2 + 7x1	1.82	1.95	1.90	
News vs. opinion	0x4 + 9x3 + 4x2 + 4x1	0x4 + 7x3 + 13x2 + 2x1	2.29	2.23	2.26	
Ad on news website	1x4 + 11x3 + 4x2 + 1x1	3x4 + 9x3 + 10x2 + 0x1	2.71	2.73	2.72	
Compare 2 news comments	0x4 + 4x3 + 10x2 + 3x1	0x4 + 5x3 + 12x2 + 5x1	2.06	2.00	2.03	
Website trustworthiness	0x4 + 3x3 + 11x2 + 3x1	0x4 + 5x3 + 12x2 + 5x1	2.00	2.00	2.00	
Facebook evidence	0x4 + 4x3 + 7x2 + 6x1	1x4 + 1x3 + 14x2 + 6x1	1.88	1.86	1.87	
Photo trustworthiness	0x4 + 2x3 + 7x2 + 8x1	0x4 + 1x3 + 8x2 + 13x1	1.65	1.45	1.54	
News vs. sponsored content	0x4 + 1x3 + 12x2 + 4x1	0x4 + 3x3 + 12x2 + 7x1	1.82	1.68	1.72	

Chi-square statistics found no significant difference between the competence means of middle and high school students.

In answering the open-ended survey question about fake news-related lessons, the following topics were mentioned, listed here in rank order by frequency of mentions (Table 2).

Single mentioned competencies included: information literacy, citing sources accurately, identify edited/faked photos, how news is created, history of fake news, consequences of fake news, and journalism.

Generally, no differences between middle and high school librarians' responses were found in the types of competencies mentioned.

However, high school librarians were more likely to provide lessons on reliable sources and databases while middle school librarians were more likely to provide lessons on evaluating websites. Nine librarians provided no lessons. In one case, the librarians mentioned doing a fake-news-related lesson in response to a teacher's request.

Table 2. Rank order of fake news-related lessons for students as mentioned by respondents

Rank order	Competency	Number of times lesson mentioned
1.	Evaluate sources	14
2.	Differentiate between true and fake news	10
3.	Determine the reliability and accuracy of sources	7
4.	Read and think critically	7
5.	Identify reliable sources (e.g., subscription databases)	4
6.	Identify the author/creator of a sources	3
7.	Distinguish between fact and opinion	3
8.	Identify bias	2
9.	Identify sponsored sources	2

When asked if a fake news curriculum existed at their sites, four middle school librarians stated that they developed a curriculum and used it independently. One elementary school had a curriculum. In one high school, half of the freshmen received a fake news curriculum and in one middle school site, the teachers generated a curriculum without collaborating with the librarian.

The other 34 librarians stated that no such curriculum existed.

DISCUSSION

The survey revealed the status of K-12 students' news literacy and their need for news literacy instruction as perceived by California school librarians.

All of the school librarian respondents presently knew about fake news with about half of them articulating the full description of fake news. The remaining respondents identified partial aspects of fake

news: being misleading or deceitful, missing verifying resources, or aiming to sell or otherwise influence. No significant difference between middle and high school librarians in defining fake news was demonstrated. One respondent listed almost all of the types of misleading information that EAVI (2017) addressed. For students to identify fake news, their teachers, including school librarians, need to be clearer about the definition of fake news.

Overall, school librarian respondents thought that their school's students performed "slightly well" relative to news literacy understanding. As the data in Table 1 indicates, no significant difference in competency level existed between middle and high school students. Perhaps because news literacy is often not explicitly addressed in California's K-12 language arts curriculum, it is unlikely that students would learn specific news literacy skills.

Both middle and high school librarian respondents stated that their schools' students were most competent at distinguishing advertisements and least proficient at discerning the trustworthiness of photographs. The relative ranking of the news literacy skills reveals that students were more proficient in distinguishing between types of news than they were in determining the relative trustworthiness and quality of news content, especially news in social media. The former entails comparing features between two sub-formats, while the latter requires analyzing the content within a source, which is a more nuanced process. Particularly as sponsored content can very closely mimic non-sponsored content, it is not surprising that students would have difficulty distinguishing the content quality between the two new origins. This finding reinforces the 2017 Stanford History Education Group study's conclusions (Wineberg & McGrew, 2017). The fact that trusting photographs was the least proficient area also points out the need for visual literacy, a set of skills that are seldom addressed systematically in academic curriculum (Silverman & Piedmont, 2016). Photographic literacy also falls under the umbrella of media literacy, which is another neglected curricular area.

Analysis of the news literacy lessons provided by both middle and high school librarian respondents reveal traditional information literacy skills: critical thinking; evaluating sources, including determining accuracy, reliability, authorship, and bias; identifying reliable sources such as databases; and distinguishing between fact and opinion. Middle school librarians more often than high school librarians mentioned teaching website evaluation skills, and high school librarians were more

likely than middle school librarians to mention teaching about reliable sources. High school librarians more often than middle school librarian taught about databases; though, high schools are more likely to subscribe to online databases than middle schools (Farmer & Safer, 2019). Two respondents mentioned two skills that focus on fake news: differentiating between true and fake news and identifying sponsored sources. Since this question was posed after the respondents answered the questions about students' competencies, the respondents were probably leveraging that information. Sadly, visual and media literacies were each mentioned only once. While a case can be made that information literacy includes visual and media literacies, the fact that evaluating websites was often mentioned (and can just as easily be labelled as information literacy alone) illustrates the need for greater awareness and focused attention on the part of school librarians. For instance, school librarians can link fake news instruction with information literacy; they can incorporate fake news as examples for information literacy instruction, and they can use fake news as a "hook" to garner students' attention, then teach news literacy and generalize it to media and information literacy.

It should be noted that nine school librarians either did not mention any lessons, or they stated that they did not provide fake news-related lessons. In one case, the respondent stated that as a new librarian, other tasks took priority. In two other cases, respondents stated that classroom teachers were too busy to take time for such lessons. Furthermore, the respondents seldom mentioned that they offered lessons in response to a classroom teacher's request. One limitation of the study is that the survey did not ask the respondents to state reasons for not providing such kinds of lessons; future researchers should ask participants the reasons for offering lessons about new literacy – or not offering such lessons. The responses can lead to identifying incentives for teaching these skills.

The fact that several librarians and teachers did not teach about news literacy was not surprising because that topic is only addressed in the California language arts framework in a couple of sample units. "Fake news" certainly is not mentioned, largely because this term is recent. Seven school librarians stated that they offered a fake news curriculum, four of whom developed and implemented it independent of their schools. One respondent said that half of the school's freshmen received fake news curriculum, but the developer and instructor were not specified. There was only one case where classroom teachers developed and implemented a

fake news curriculum, and the effort was done without collaborating with the school librarian. The survey did not ask the respondents to detail the curriculum, so the scope and sequence were not ascertained. Nevertheless, it seems to be apparent that while educators see a need for students to identify fake news and become news literate, the respondents are not hearing that cry. Instead, school librarians seem to spearhead such efforts, if anyone does at all.

Analysis of responses revealed a positive correlation between students' news competence and the provision of fake news-related lessons. Though, neither its significance could not be quantitatively determined nor could a causal relationship be inferred. Perhaps, those school librarians who taught such lessons saw evidence of students' news literacy, which might not be inferred without such instruction. Alternatively, school librarians who were aware of the need for fake news and addressed that need might be more conscious of students' learning in that area.

CONCLUSIONS

This exploratory study focused on California K-12 school librarians' perceptions of their schools' students' news literacy status and needs and found out what efforts school librarians made in offering instruction about fake news. The study is limited in that the number of respondents was less than 50 with the majority working in a single district that is known for providing above-average library services. Nevertheless, these respondents' perceptions about students' news literacy echo the findings of the 2017 Stanford study. For example, less than ten percent of respondents thought that students could perform moderately well and none thought students could do very well on trusting photos; in the Stanford study, less than twenty percent of students question the source of the tested post. Stanford students had difficulty evaluating tweets just as the California respondents noted about their own schools' students.

Possibly because the term "fake news" is relatively new in terms of the public's awareness, it is not surprising that students' news literacy was about at the same degree of competency regardless of grade level. In this period of growing awareness, some concepts and skills may need to overlap grade level instruction with the distinguishing factors being developmentally appropriate content and analysis.

School librarians expressed a need for news literacy instruction and identified generic information literacy

skills. However, it became apparent that explicit instruction in visual and media literacies are also necessary. Students need to know how to access, interpret, evaluate, and respond to news in its various forms. They need to understand how news and other mass media are produced and the critical features of each medium. They should also be encouraged to participate in generating news.

Again, news literacy is seldom integrated systematically into the curriculum; likewise, media and visual literacies also lack curricular attention (Hobbs, 2010; Moore, 2013). As noted above, as information professionals and as teaching faculty, school librarians constitute the obvious source of expertise and instruction. Nevertheless, many school librarians themselves need more specialized knowledge about news, media and visual literacies (Jacobson, 2017; Southworth, 2014).

In short, fake news is a wake-up call to educators and the community-at-large to gain critical competencies. Students need to receive explicit instruction in critically analyzing news stories, visual messages, and mass media. However, educators themselves also need to have instruction in these literacies, so they have the skills needed to integrate them into the curriculum. Once they have such expertise, school librarians are well-positioned to leverage the hot topic of fake news to highlight the importance of information and media literacies and incorporate them systematically into the school's curriculum so that students will be better informed citizens.

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APPENDIX

Thank you for participating in this study, the purpose of which is to examine the perceptions of teacher librarians about “fake news” and its status within your school in order to ascertain the needs for curriculum about fake news. You have been asked to participate in this study because you are a practicing teacher librarian. This questionnaire will take between 5 and 10 minutes to complete.

Please read each question carefully and answer them as accurately as possible. The success of the study depends on this.

As a reminder, your participation is entirely voluntary and your responses will be held in the strictest confidence. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. Participation or non-participation will not affect your employment status or any other personal consideration or right you usually expect. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which in the opinion of the researcher warrant doing so. Completion of this study serves as your agreement to participate.

Survey Instructions

Please adhere to the following guidelines when completing the survey:

1. You may also complete the survey at any computer that has Internet access. If you have received this e-mail through your work address, for example, you can complete the survey using your home computer or a public computer. The two requirements for participation in the survey are that you have the URL address and your agreement.

2. I am only interested in your responses that pertain to your library job. If you have another job, do not draw upon this other job in your responses.

3. If you work at more than one library, please provide responses for the job where you spend the most amount of your time.

4. If you would like to participate to a greater extent in this research (about 2 hours of self-assessment and observation), or have questions, please contact the researcher.

Fake news questionnaire

What is your definition of “fake news”?

If you work with middle school students:

Given the following tasks, how well would your school's students perform on an A-F scale, A being best?

- Consider tweets and determine which is the most trustworthy: A-B-C-D-E-F
- Read a sponsored post and explain why it might not be reliable: A-B-C-D-E-F
- Examine a post from the newspaper comment section and explain whether they would use it in a research report: A-B-C-D-E-F
- Distinguish between a news article and an opinion column: A-B-C-D-E-F
- Identify advertisement on a news website: A-B-C-D-E-F

If you work with high school students:

Given the following tasks, how well would your school's students perform on an A-F scale, A being best?

- Compare and evaluate 2 posts from a newspaper's comment section: A-B-C-D-E-F
- In an open web search, decide if a website can be trusted: A-B-C-D-E-F
- Consider the relative strength of evidence that 2 users present in a Facebook exchange: A-B-C-D-E-F
- Decide whether to trust a photograph posted on a photo-sharing website: A-B-C-D-E-F
- Determine whether a news story or a sponsored post is more reliable: A-B-C-D-E-F

What “fake news” related lessons do you give?

What “fake news” curriculum is provided by your school, if you know?

What information and skills should students have relative to “fake news”?