Evaluating online information:
Attitudes and practices of secondary English Language Arts teachers

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ABSTRACT

As an increasing number of teens are engaging in digital environments, they are becoming open to online misinformation often designed to further a variety of agendas. Online misinformation, or "fake news" as it is often referred to in popular culture, permeates all Web 2.0 technologies. Since English Language Arts curriculums often focus on topics related to critical media literacy, English Language Arts teachers have a unique opportunity to integrate strategies to evaluate online information. This survey design study explored the attitudes and practices of secondary English Language Arts teachers regarding teaching students strategies to detect online misinformation. Teachers working within one mid-Atlantic suburban county completed a web-based survey consisting of questions about their demographics as well as the importance for students to learn, teachers to teach, and frequency of integrating strategies to evaluate online information. Results indicated overwhelming support for integrating critical media literacy into English Language Arts classrooms.

Keywords: *critical media literacy, fake news, secondary English language arts, instructional practices, online misinformation*.

INTRODUCTION

Today's students are engaging with digital environments more than ever before. For example, 95% of teens reported they have access to a smartphone, and 45% of teens reported being online almost constantly (Anderson & Jiang, 2018). This digital engagement opens teens to the threat of online misinformation often designed to further a variety of agendas. For the purposes of this paper, online misinformation, recently referred to as "fake news" in popular culture, is defined as "…pieces that ignore, twist/misrepresent, or invent facts" (Ireland, 2018, p.123) in digital environments such as social media, blogs, wikis, and other web sites. While some scholars categorize parody and satire as forms of online misinformation, these genres were not considered in this study as they are not intended to be deceptive to users.

Because online misinformation permeates all Web 2.0 technologies, students need to acquire the necessary critical media literacy skills to evaluate online text. Teens who lack the skills to reason about the veracity of online information can be fooled by misinformation they receive through social media (Wineburg et al., 2016). Although Web 2.0 technologies allow for active online participation, they also create greater opportunities for students to surround themselves with others who share the same beliefs (Alvermann, 2017). However, surrounding oneself with others who share the same beliefs may prevent students from engaging with others who present different perspectives and can lead to higher incidences of confirmation bias (Brummette et al., 2018).

Secondary English Language Arts teachers are increasingly challenged to place greater emphasis on the relationship between power dynamics and digital tools (Sulzer, 2018). Teachers are tasked with encouraging students to practice civil online discourse, to accept other perspectives presented in online environments, and to fact-check online information for accuracy (Tan, 2018). To become informed citizens, students need to develop skills to read online texts critically and to determine whether a particular media message "serves the interests of some at the expense of others" (Janks, 2018, p. 95). Critical evaluation is a guide to evaluating online information (Coiro, 2017). This includes: assessing relevance and accuracy of the information, being aware of bias and perspective, and judging the trustworthiness of authors. To assist students in these critical evaluation strategies, teachers need to incorporate prompting and modeling into their instruction to help students become attentive to overlooking information, comparing the ideas presented in the text to their pre-established beliefs, and considering the author's perspective (Coiro, 2017).

Integrating critical media literacy

Critical media literacy offers guidance for secondary English Language Arts teachers to teach students strategies to evaluate online information. Alvermann and Hagood (2000) defined critical media literacy as "engaging students in the analysis of textual images (both print and nonprint), the study of audiences, and the mapping of subject positions" (p. 194). Thus, educators must assist students with critical media literacy skills to evaluate texts they encounter online (Alvermann et al., 2012).

Through critical media literacy, students become equipped with the skills to evaluate online information. Critical media literacy invites students to look for and evaluate: bias, evaluate the voices present and the voices omitted, how the writer positions the reader, and the previous background of the author (Comber & Grant, 2018). By incorporating critical media literacy skills in classroom instruction, students are engaged with online texts on a deeper level and are encouraged to look beyond surface features of the text. While many secondary English Language Arts curriculums contain learning goals focused on media literacy, the detection of online misinformation can be embedded into other curricular goals as well.

Integrating critical media literacy into content lessons include evaluating the credibility of media messages through identifying the author's intent, persuasive techniques, emotional tactics, and overall message effectiveness. Scheibe (2004) suggested students ask the following questions to evaluate media messages:

1. Who made – and who sponsored – this message, and what is their purpose?
2. Who is the target audience and how is the message specifically tailored to that audience?
3. What are the different techniques used to inform, persuade, entertain, and attract attention?
4. What messages are communicated (and/or implied) about certain people, places, events, behaviors, lifestyles, and so forth?
5. How current, accurate, and credible is the information in this message?

6. What is left out of this message that might be important to know?

Similarly, Comber and Grant (2018) suggested teachers integrate strategies to detect media literacy by "finding links to the curriculum" (p. 330). Further, they suggested that skills found in English Language Arts curriculums assisting students with the detection of fake news should include critical reading and analysis of content. Furthermore, Hobbs (2007) identified five considerations useful in critical viewing of news: purpose, creative construction techniques, point of view, omissions, and making an effective comparison and contrast among news sources. Since news media is always "partial, selective, and incomplete" (p. 148), students must be aware of biases within the message as well as their own bias.

Key questions to ask when analyzing media messages

The National Association for Media Literacy Education (NAMLE) lists *Key Questions to Ask When Analyzing Media Messages* (Rogow & Scheibe, 2007). Their questions are placed into three categories including *Authors and Audiences*, *Messages and Meanings*, and *Representations and Reality*. The subcategories of *Authors and Audiences* include authorship, purposes, economics, effects, and responses. *Messages and Meanings* include the subcategories of content, techniques, and interpretations. Finally, *Representations and Reality* encompass subcategories of context and credibility. The following sections present relevant selected literature framed through NAMLE's *Key Questions to Ask When Analyzing Media Messages*.

Authors and audiences

When students consider the authors and audiences of media messages, they are questioning the intent of the creator, the target audience, how the message was intended to affect the audience including perceived benefits, and how the consumer can participate with the media message (Rogow & Scheibe, 2007). To be a critical consumer of media, students must learn to consider both text analysis and analysis of power in media messages. Thus, readers must learn to "distinguish fact from opinion, the accuracy of facts and the soundness of opinions, the evidence for claims, and the quality of reasoning in arguments" (Janks, 2018, p. 96). Students need to learn to consider the reliability of the evidence presented by analyzing the text and how the

writer's voice and tone positions the reader. Learning to consider the message's point of view, purpose, voice, tone, and intended audience will equip students to engage with the bombardment of information they encounter every day.

All texts contain inherent bias that reflects the position of the author (Alvermann et al., 2012). Yet, Fisch (2018) warned that many students are unable to have a counterbalancing trust toward media messages and are either very trusting or very incredulous toward media messages. While all media messages contain bias, possessing the skills to recognize bias allows students to effectively critically consume information rather than blindly trusting or doubting the media message. Identifying the audience and writer's voice helps the reader to consider who is participating in the conversation and the intent of the message (Alvermann et al., 2012).

Messages and meanings

Considering messages and meanings invites students to reflect about the content of the message, such as how that content affects themselves, the particular communication techniques used to elicit a response, and different interpretations surrounding the media message (Rogow & Scheibe, 2007). Thus, students must learn strategies to evaluate the intent of media messages and effectively navigate online information sources. Students receiving notifications to their mobile devices are constantly challenged to evaluate the content of media messages (LaGarde & Hudgins, 2018). This challenge requires students to discern the intent of online information, as they often believe deceptive online information simply because they do not question the reliability of the message's supporting evidence (Breakstone et al., 2018).

Teens often focus on the surface features of online texts and frequently rely too heavily on graphic elements such as photos and video associated with online texts to determine reliability (Breakstone et al., 2018). These graphic elements are easily manipulated and can trick students into believing an online text containing misinformation is based on facts (Wineburg et al., 2016). In a study of 170 high school students' level of success with evaluating online information, Wineburg et al. (2016) found that most students relied on the photograph attached to the media message to evaluate the message's validity, ignoring the source of the photograph. While students look to accompanying graphic features of online text as evidence of reliability,

the ubiquity of photo and video editing tools allows for easy manipulation and dissemination of fake images and video. To detect misinformation, students must consider not only the intent of online media messages and bias within the message, but also the message's accompanying graphic features.

Representations and reality

When considering representations and reality, in addition to the credibility of the message itself, students focus on the context of when the media message was created and how it was shared with the public (Rogow & Scheibe, 2007). Students must learn to be wary about unintentionally sharing online misinformation merely to confirm their beliefs to others who share similar beliefs. Leland et al. (2018) warned that once the reader accepts information as fact, it is often difficult for the receiver of the message to change their opinion even if the message has been debunked.

Online misinformation often appeals to confirmation bias and prevents "meaningful, constructive conversations…" (Tan, 2018, p. 33). Rochlin (2017) described this as selective exposure theory, which is the theory that people will seek exposure to news stories that confirm their pre-existing beliefs and avoid information that challenges their beliefs. Social media perpetuates this homophily – "propensity to associate and interact with other users that have similar traits and ideologies" and that online misinformation often travels within echo chambers among groups to reaffirm their already established beliefs (Brummette et al., 2018, p. 498).

Along with recognizing bias within the media message, students must understand their own bias. This awareness promotes effective conversation about civic issues and combats the perpetuation of online misinformation within groups who share similar beliefs. Students must also learn to interpret the graphic features that accompany online media messages for reliability. Thus, exposing students to "fake news" in curricular contexts allows them to practice their media evaluation skills.

Practices to detect online misinformation

Students look to their English Language Arts teachers to build the skills needed to become critical media consumers as they navigate online environments. Since English Language Arts curriculums typically focus on topics related to critical literacy such as audience, purpose, authorship, voice, tone, and persuasive techniques, English Language Arts teachers have a unique opportunity to integrate strategies for students to evaluate online information.

Breakstone et al. (2018) pointed to evaluation strategies used by professional fact checkers as a model for teachers to follow. They explained that professional fact checkers "read laterally" by opening tabs along the web browser's horizontal axis to further investigate by comparing information from other sources about the original site's author or sponsoring organization. Similarly, Comber and Grant (2018) described a classroom lesson where the students viewed an episode of Behind the News focusing on online misinformation. In this lesson, students wrote unfamiliar words and phrases, such as "rumor mill," "extreme bias," and "a little too crazy to be true" (p. 330). Then, the class viewed a PowerPoint containing images of world leaders, authorized images, and popular images that evoked emotional responses. They encouraged students to ask the following questions:

- What do you notice about the images?
- Is there a difference in terms of prime minister, president, and chancellor?
- Where do these different titles come from?
- How many of the leaders are women, and how many are men?
- How are these leaders portrayed?
- What do the images symbolize?

The authors stressed the importance for teachers to promote a focus on positive action and change through critical media literacy.

Sulzer (2018) suggested that English teachers have conversations about power dynamics and digital tools as well as their relationship. Similarly, Leland et al. (2018) promoted implementing talking back to online texts, which allows students to weigh evidence, question the author's purpose, and consider multiple perspectives. In their study, eighth-grade students engaged in six activities with the following texts: *I am Thomas*, *Duck, Death, and the Tulip*, and *Grandad's Gifts*. Activities includes read-aloud group analysis, written or artistic responses, and responding to the text as well as censorship. The study authors used grounded theory to analyze student artifacts and identify patterns. Students progressed from merely summarizing in early activities to beginning to push back and question the authority of the text in later activities. The authors concluded that the implementation of talking back to texts promotes students' practice of media criticism skills as well as a

more thoughtful approach as readers and citizens in a post-truth society.

The research problem

Despite the need to prepare students with the critical literacy skills necessary for evaluating online information, few research studies address the topic of integrating critical media literacy into content lessons. Furthermore, Huguet et al. (2019) warned that if media literacy is not assigned to a specific content area, it is possible that no content area will focus on implementing media literacy strategies. This lack of ownership for media literacy creates a tension between the need for students to learn critical media literacy skills and the responsibility for specific content areas to teach media literacy strategies. Therefore, the purpose of this study is to investigate teachers' attitudes and practices related to teaching secondary English/Language Arts students strategies for evaluating online information. The study is guided by the following questions:

- How do secondary English/Language Arts teachers rate the importance for students to learn strategies to evaluate online information?
- How do secondary English/Language Arts teachers rate the importance of teaching students strategies to evaluate online information?
- How often do secondary English/Language Arts teachers report using particular instructional practices to teach students strategies to evaluate online information?
- What instructional practices do secondary English/Language Arts teachers report implementing to teach students strategies to evaluate online information?
- What is the relationship between teachers' demographics (age, grade level, years of experience) and their attitudes and perceptions about evaluating online information?

METHODS

This study used a survey design. Johnson and Christensen (2013) defined survey research as "a nonexperimental research method based on questionnaires or interviews" (p. 249). Furthermore, Weninger et al. (2017) called for more quantitative design research concerning teacher beliefs, practice, and context surrounding media literacy pedagogy. Thus, a web survey was created and disseminated to collect quantitative data for this study. Web surveys are questionnaires disseminated online and designed to retrieve information about participants' "thoughts, feelings, attitudes, beliefs, values, perceptions, personality, and behavioral intentions" (Johnson & Christensen, 2013, p. 192). Therefore, this survey design was chosen as an appropriate way to examine the attitudes and practices of secondary English Language Arts teachers regarding teaching strategies to evaluate online information.

Participants

Participants in this study were self-selected from 635 secondary English Language Arts teachers working within a suburban county in a mid-Atlantic state who received the web survey. Included in this sample were teachers who taught remedial, academic, honors, advanced placement, and international baccalaureate English Language Arts classes for grades 6-12. Eighty-seven teachers accessed the survey. Seventy-seven teachers completed the survey, and ten additional teachers acknowledged they did not wish to participate in the study.
Table 1 summarizes the demographic data.

Instrument

The survey used to collect secondary English Language Arts teachers' attitudes and practices was divided into five sections: "Demographic Information," "Student Learning Importance," "Teaching Importance," "Teaching Frequency," and "Instructional Practices." The survey was researcher designed. The questions were developed based on the media literacy objectives listed in the participating county's English Language Arts curriculum framework. Upon analyzing the listed media literacy objectives, 15 teachable strategies related to the NAMLE's *Key Questions to Ask When Analyzing Media Messages* were identified. These 15 skills were the basis for questions on "Student Learning Importance," "Teaching Importance," and "Teaching Frequency." Figure 1 displays the 15 teachable strategies categorized within NAMLE's *Key Questions to Ask When Analyzing Media Messages*.

Table 1. *Summary of participant demographics*

Age	
20-30	*20.8%*
31-40	*28.6%*
41-50	*24.7%*
51-60	*22.1%*
Over 60	*3.9%*
Grade Level Taught	
Middle-School (6-8)	*44.2%*
Lower High School (9-10)	*14.3%*
Upper High School (11-12)	*20.8%*
Lower and Upper High School (9-12)	*20.8%*
Years of Experience Teaching ELA	
0-4	*24.7%*
5-9	*22.1%*
10-14	*20.8%*
15-20	*15.6%*
Over 20	*16.9%*
Student Course Level Taught	
Remedial	*14%*
Academic	*70%*
Honors	*78%*
Advanced placement	*22%*
International baccalaureate	*0%*
Gender	
Male	*13%*
Female	*87%*

"Student Learning Importance" examined the level of importance English Language Arts teachers placed on students learning strategies to evaluate online information. "Teaching Importance" examined the level of importance English Language Arts teachers placed on teaching strategies to evaluate online information. "Teaching Frequency" examined how often English Language Arts teachers incorporate strategies to evaluate online information into their instruction. The "Instructional Practice" questions were developed based on general teaching practices. "Instructional Practice" explored the instructional practices selected by English Language Arts teachers to teach students to evaluate online information. The survey totaled 51 questions.

"Demographic Information" was designed to collect information about the participants' demographic data. This section contained 3 multiple choices and 2 multiple-select questions. While multiple choice questions allowed only one response, multiple-select allowed participants to select more than one response. For "Participants' Current Age," the choices were "20-30," "31-40," "41-50," "51-60," and "Over 60." For "Grade Level Taught," participants could select multiple

answers and had the options of "6," "7," "8," "9," "10," "11," and "12." The options for the multiple-choice question for "Years of Experience Teaching English Language Arts" were "0-4," "5-9," "10-14," "15-20," and "Over 20." The options for Gender were "Male" and "Female." The options for the multiple select "Student Course Level Question" were "Remedial," "Academic," "Honors," "Advanced Placement," and "International Baccalaureate." "Grade Level Taught" and "Student Course Level" were designed as multiple select questions because some secondary teachers teach multiple grades levels and various course levels.

"Student Learning Importance" was designed to measure how important it is for secondary English Language Arts students to learn strategies to evaluate online information. This section contained 15 questions based on media literacy strategies found in the participating county's English Language Arts curriculum framework. To answer the questions in this section, participants had the options of "Not Important," "Somewhat Important," "Important," "Very Important," or "Extremely Important."

Authors and audiences	Messages and meanings	Representations and reality
Locate and evaluate the background of the author of media message	Identify and evaluate the intended purpose of media messages	Determine trustworthiness of evidence in media messages
Locate and evaluate organizational institutions affiliated with media messages	Distinguish fact from opinion in media messages	Identify and evaluate how public opinion trends shape media messages
Distinguish the intended audience of media messages	Identify and evaluate the impact of format (i.e. word choice, color scheme, use of visuals) as informational techniques in media messages	Identify and evaluate how visual images convey author's or organization's viewpoint
Recognize and interpret author(s)' point of view (i.e. Whose voices are presented? Whose voices are omitted?)	Identify and evaluate persuasive techniques used in media messages	
Identify and evaluate motives for media messages	Determine the quality of reasoning present in media messages	
Identify and evaluate potential bias in media messages	Assess the relationship of personal bias and message bias	

Figure 1. *15 Teachable strategies aligned with NAMLE's key questions to ask*

"Teaching Importance" was designed to measure how important it is for secondary English Language Arts teachers to teach students strategies to evaluate online information. This section contained 15 questions based on media literacy strategies found in the participating county's English Language Arts curriculum framework. To answer the questions in this section, participants had the options of "Not Important," "Somewhat Important," "Important," "Very Important," or "Extremely Important."

"Teaching Frequency" was designed to measure how often secondary English Language Arts teachers teach students strategies to evaluate online information. This section contained 15 questions based on media literacy strategies found in the participating county's English Language Arts curriculum framework. To answer the questions in this section, participants had the options of "Never," "Rarely," "Sometimes," "Usually," or "Always."

"Instructional Practice" was designed to examine the teaching practices secondary English Language Arts teachers use to teach students strategies to evaluate online information. This section contained one question with 8 selections. The question and selections were designed based on general teaching practices. Participants could select from "Explicit evaluating online information lessons", "Embedded within other

content objectives," "Teachable moment," "Direct instruction," "Small group activity," "Independent activity," "Creating and/or sharing visual representations," and "I do not teach strategies to evaluate online information." Participants had the option of selecting more than one answer for this question.

A panel of experts and two additional secondary teachers reviewed the survey, offered suggestions, and reviewed a second time. While the panel of experts validated the survey overall, they commented on the specific wording of questions to ensure participant understandability and the ability for participants to skip over questions. Since the survey was administered through Google Forms, the panel of experts commented on the importance of the anonymity of the participants. Two additional secondary Social Studies teachers reviewed the survey. Their comments included the questions were easily understood, the survey was of the appropriate length, and Social Studies teachers should be teaching similar content as well.

Data collection

The survey was disseminated to secondary English Language Arts teachers through a link to a Google Form provided in an e-mail from the participating county's Supervisor of Secondary Reading. The initial e-mail

from the Supervisor of Secondary Reading invited the secondary English Language Arts Teachers grades 6-12 to participate in the survey. After three weeks, the Supervisor of Secondary Reading sent a follow up e-mail containing the Google Forms link to the survey. Once this process had been completed, 77 survey responses resulted.

Data was exported from the Google Form to a spreadsheet. From the spreadsheet, it was imported to SPSS. A numeric value was given to each participant response for data analysis. The frequencies function was used to determine the percentages of a given response in the student learning, teaching importance, and teaching frequency sections.

RESULTS

The first question of the study asked: How do secondary English/Language Arts teachers rate the importance for students to learn strategies to evaluate online information? In order to answer this question, descriptive statistics were computed from the participants' responses of the "Student Learning Importance" portion of the survey.

Participants reported overwhelming support for students to learn strategies to evaluate online information. 14 of the 15 strategies were reported as at least somewhat important for students to learn. The percentage of participants who reported these strategies as somewhat important for students to learn did not exceed 7.8% for each question. Similarly, the percentage of participants who reported these strategies as important for students to learn did not exceed 29.9% for each question. The majority of the participants reported the 15 strategies listed are either very important or extremely important for students to learn. Table 2 summarizes the descriptive data.

Table 2. *Teachers' rating of importance for student learning*

	Not important	Somewhat important	Important	Very important	Extremely important
Locate and evaluate the background of the author of media messages	*0%*	*7.8%*	*18.2%*	*41.6%*	*32.5%*
Locate and evaluate organizational institutions affiliated with media messages	*0%*	*6.5%*	*24.7%*	*41.6%*	*27.3%*
Distinguish the intended audience of media messages	*0%*	*2.6%*	*22.1%*	*46.8%*	*28.6%*
Identify and evaluate the intended purpose of media messages.	*0%*	*1.3%*	*6.5%*	*48.1%*	*44.2%*
Recognize and interpret author(s)' point of view (i.e. Whose voices are presented? Whose voices are omitted?)	*1.3%*	*1.3%*	*16.9%*	*35.1%*	*45.5%*
Distinguish fact from opinion in media messages	*0%*	*1.3%*	*2.6%*	*27.3%*	*67.5%*
Determine trustworthiness of evidence in media messages	*0%*	*1.3%*	*5.2%*	*31.2%*	*61.8%*
Identify and evaluate the impact of format (i.e. word choice, color scheme, use of visuals) as informational techniques in media messages	*0%*	*6.5%*	*29.9%*	*41.6%*	*21.1%*
Identify and evaluate persuasive techniques used in media messages	*0%*	*3.9%*	*16.9%*	*42.9%*	*36.4%*
Identify and evaluate how public opinion trends shape media messages	*0%*	*6.5%*	*24.7%*	*39%*	*29.9%*
Identify and evaluate how visual images convey author's or organization's viewpoint	*0%*	*6.5%*	*24.7%*	*42.9%*	*26.0%*
Identify and evaluate motives for media messages	*0%*	*3.9%*	*15.6%*	*41.6%*	*39%*
Identify and evaluate potential bias in media messages	*0%*	*3.9%*	*9.1%*	*29.9%*	*55.8%*
Assess the relationship of personal bias and message bias	*0%*	*7.8%*	*14.3%*	*40.8%*	*36.8%*
Determine the quality of reasoning present in media messages	*0%*	*5.2%*	*15.6%*	*44.2%*	*33.8%*

The second question of the study asked: How do secondary English/Language Arts teachers rate the importance of teaching students strategies to evaluate online information? In order to answer this question, descriptive statistics were computed from the participants' responses of the "Teaching Importance" portion of the survey. Participants reported overwhelming support for teaching strategies to

evaluate online information. 11 of the 15 strategies were reported as at least somewhat important for them to teach. The percentage of participants who reported these strategies as not important to teach did not exceed 2.6% for each question. The percentage of participants who reported these strategies as somewhat important to teach did not exceed 11.7% for each question. Similarly, the percentage of participants who reported these strategies as important to teach did not exceed 29.9% for each question. The majority of the participants reported the 15 strategies listed as either very important or extremely important for them to teach. Table 3 summarizes the descriptive data.

Table 3. *Teachers' rating of importance for teaching*

	Not important	Somewhat important	Important	Very important	Extremely important
Locate and evaluate the background of the author of media messages	0%	10.4%	20.8%	42.9%	26%
Locate and evaluate organizational institutions affiliated with media messages	1.3%	9.1%	22.1%	41.6%	26%
Distinguish the intended audience of media messages	0%	0%	22.1%	41.6%	35.1%
Identify and evaluate the intended purpose of media messages.	0%	0%	18.2%	36.4%	45.5%
Recognize and interpret author(s)' point of view (i.e. Whose voices are presented? Whose voices are omitted?)	0%	2.6%	19.5%	29.9%	46.8%
Distinguish fact from opinion in media messages	0%	1.3%	10.4%	31.2%	57.1%
Determine trustworthiness of evidence in media messages	0%	2.6%	11.7%	28.6%	57.1%
Identify and evaluate the impact of format (i.e. word choice, color scheme, use of visuals) as informational techniques in media messages	0%	9.1%	23.4%	40.3%	27.3%
Identify and evaluate persuasive techniques used in media messages	0%	2.6%	16.9%	36.4%	44.2%
Identify and evaluate how public opinion trends shape media messages	2.6%	10.4%	28.6%	36.4%	22.1%
Identify and evaluate how visual images convey author's or organization's viewpoint	0%	11.7%	29.9%	35.1%	23.4%
Identify and evaluate motives for media messages	0%	5.2%	26%	29.9%	37.7%
Identify and evaluate potential bias in media messages	0%	5.2%	15.6%	37.7%	40.3%
Assess the relationship of personal bias and message bias	2.6%	6.5%	27.3%	31.2%	32.5%
Determine the quality of reasoning present in media messages	2.6%	5.2%	24.7%	36.4%	31.2%

The third question of the study asked: How often do secondary English/Language Arts teachers report using particular instructional practices to teach students strategies to evaluate online information? In order to answer this question, descriptive statistics were computed from the participants' responses to the "Teaching Frequency" portion of the survey. Participants reported implementing strategies for evaluating online information with great frequency.

Three of the 15 strategies were reported as implemented at least rarely. The percentage of participants who report never implementing these strategies did not exceed 7.8% for each question. The percentage of participants who reported rarely implementing these strategies did not exceed 20.8% for each question. The percentage of participants who reported sometimes implementing these strategies did not exceed 32.5% for each question. The majority of participants reported they sometimes or usually implement strategies for evaluating online information. Table 4 summarizes the descriptive data.

The fourth question of the study asked: What instructional practices do secondary English/Language Arts teachers report implementing to teach students strategies to evaluate online information? In order to answer this question, descriptive statistics were computed from the participants' responses of the "Instructional Practice" portion of the survey. The instructional practices section of the survey allowed participants multiple selections including "I do not teach strategies to evaluate online information."

Table 4. *Teachers' frequency of teaching*

	Never	Rarely	Sometimes	Usually	Always
Locate and evaluate the background of the author of media messages	2.6%	11.7%	22.1%	41.6%	20.8%
Locate and evaluate organizational institutions affiliated with media messages	3.9%	9.1%	27.3%	40.3%	18.4%
Distinguish the intended audience of media messages	1.3%	2.6%	16.9%	45.5%	32.5%
Identify and evaluate the intended purpose of media messages.	1.3%	2.6%	19.5%	32.5%	41.6%
Recognize and interpret author(s)' point of view (i.e. Whose voices are presented? Whose voices are omitted?)	1.3%	5.2%	18.2%	40.3%	34.2%
Distinguish fact from opinion in media messages	1.3%	2.6%	11.7%	33.8%	49.4%
Determine trustworthiness of evidence in media messages	0%	5.2%	16.9%	41.6%	35.1%
Identify and evaluate the impact of format (i.e. word choice, color scheme, use of visuals) as informational techniques in media messages	0%	13%	28.6%	39%	18.2%
Identify and evaluate persuasive techniques used in media messages	1.3%	7.8%	15.6%	42.9%	31.2%
Identify and evaluate how public opinion trends shape media messages	7.8%	19.5%	32.5%	27.3%	11.7%
Identify and evaluate how visual images convey author's or organization's viewpoint	0%	20.8%	26%	35.1%	16.9%
Identify and evaluate motives for media messages	5.2%	6.5%	26%	40.3%	20.8%
Identify and evaluate potential bias in media messages	1.3%	6.5%	22.1%	45.5%	23.4%
Assess the relationship of personal bias and message bias	7.8%	13%	20.8%	40.3%	16.9%
Determine the quality of reasoning present in media messages	6.5%	10.4%	31.2%	31.2%	19.5%

They were also able to write-in practices not listed as selections in the survey. For 6 of the 8 categories, at least 57.1% participants reported implementing a particular instruction practice to teach students strategies for evaluating online information. Only 1 participant reported not teaching strategies to evaluate online information. Three participants wrote in answers. The write-in responses indicated they teach student strategies to evaluate online information through modeling with texts that are brought into the classroom, through student voice and choice, and working with the librarians on lesson(s) about fake news and how to analyze a reliable source for students to complete a research project. Table 5 summarizes the descriptive data.

Table 5. *Instructional practices*

Instructional Practices	
Explicit evaluating online information lessons	59.7%
Embedded within other content objectives	57.1%
Teachable moment	85.7%
Direct instruction	74.0%
Small group activity	62.3%
Independent activity	61.0%
Creating and/or sharing visual representations	46.7%
I do not teach strategies to evaluate online information	0.01%

The fifth question of the study asked: What is the relationship between teachers' demographics (age, grade level, years of experience) and their attitudes and perceptions about evaluating online information? A

Pearson product-moment correlation was conducted to determine the strength of relationship between the six variables. Three of the variables – age, grade level, and years of experience – were developed from responses from the demographics section of the survey. The other three variables – student learning importance, teaching importance, and frequency of teaching – were developed from responses of the 15 strategies in each of three separate sections of the survey.

Results of the correlation identified a significant relationship between Age and Years of Experience (r =.560, p(two-tailed) <.01), Grade Level and Years of Experience, (r=.246, p(two-tailed) <.05), and Teaching Importance and Student Learning Importance, (r=.471,

p(two-tailed) <.01). Thus, the correlation did not identify a significant relationship between any of the demographic categories and student learning importance, teaching importance, and frequency of teaching. However, the significant relationship between teaching importance and student learning importance suggests teachers value relevant strategies for students in their teaching. It is concerning that frequency of teaching does not have a significant relationship to student learning importance or teaching importance. Although teachers value relevant strategies, this does not reflect how often teachers integrate them into their instruction. Results of the correlation analysis are presented in Table 6.

Table 6. *Pearson's correlation coefficient for six variables*

	Age	Grade level	Years of experience	Student learning importance	Teaching importance	Frequency of teaching
Age	1					
Grade level	.212	1				
Years of experience	.560**	.246*	1			
Student learning importance	-.009	.110	-.099	1		
Teaching importance	.119	.183	.034	.471**	1	
Frequency of teaching	-.058	.036	-.097	.031	-.024	1

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

Discussion

Teachers reported overwhelming support for students to learn strategies for evaluating online information as well as the importance for secondary English Language Arts teachers to teach them. Also, teachers reported implementing these strategies frequently. Further, most participants reported teaching strategies to evaluate online information through teachable moments. No significant relationships were found between demographic and survey data.

Distinguishing fact from opinion in media messages was reported as the highest valued strategy for students to learn and teachers to teach. Similarly, it was reported as implemented the most often. Although distinguishing fact from opinion is a necessary step toward critical evaluation, facts "must be evaluated, critiqued, reviewed, and analyzed to have any meaning to a relevant audience" (Tan, 2018, p. 25). Tan (2018) explained a student can copy and paste information from

Google searches and receive facts; however, that student lacks the analysis to make facts meaningful and offer a valuable contribution. Further, he suggested educators consider teaching the difference between gathering facts and analyzing them. Therefore, teachers must look beyond categorizing facts and opinions to promote deeper analysis.

Determining trustworthiness of evidence in media messages was also frequently reported as highly valued for students to learn and teachers to teach. It was also reported as implemented at least rarely by all participants. Teachers can implement opportunities for students to determine trustworthiness of evidence by giving them opportunities to talk back to texts (Leland et al., 2018), corroborate sources (Ireland, 2018), and analyze the text's message as well as power dynamics within the text (Janks, 2018). Although the survey data and relevant selected literature point to teachers valuing determining trustworthiness of evidence, whether this strategy is effectively implemented is unknown.

Breakstone et al. (2018) warned students often believe misinformation just because evidence is presented without checking its accuracy. Thus, future research should consider exploring teachers' practices for determining trustworthiness of evidence in media messages.

Identifying and evaluating how public opinion trends shape media messages was reported as one of the least important for students to learn and teachers to teach as well as implemented less frequently including 7.8% who responded as never implementing this strategy. Huguet et al. (2019) discussed three categories of media literacy education including economic drivers, civic life and democracy, and a means to determine quality of information. How public opinion trends shape media messages aligns with a focus on civic life and democracy, which some educators might associate with Social Studies rather than English Language Arts. However, this does not explain the low rating for "Student Learning Importance." Although some might consider it to be slightly outside of the scope of English Language Arts, this strategy is based on a standard listed in the participating county's English Language Arts curriculum framework. Thus, this strategy promotes cross-curricular partnerships between English Language Arts and Social Studies and encourages rich learning opportunities for students to evaluate online information.

The majority of participants reported teaching evaluating online information strategies through teachable moments. These responses suggest many teachers are not using a planned or pre-established curriculum to teach critical evaluation strategies. Furthermore, teachable moments require teachers to activate and articulate their own background knowledge. This is concerning because adults typically overestimate their ability with skills related to critical media literacy (Gourguechon, 2019). Thus, teachable moments are only effective if teachers have acquired the necessary skills to evaluate online information themselves. This aligns with the call made by Lee (2018) for further research on media literacy education for adults focused on evaluating online information and resources.

Questions related to visual images were among those least valued by secondary English Language Arts Teachers for students to learn and teachers to teach. Also, strategies related to visual images were reported as implemented less frequently. These strategies included identifying and evaluating the impact of format and evaluating how visual images convey an author or organization's viewpoint. Breakstone et al. (2018)

explained that surface features of the text often fool students, including visual images. Because online texts are typically multimodal and image manipulation software is becoming more accessible, teachers must incorporate visual literacy strategies to enhance their evaluating online information instruction. Thus, future research should consider the impact of teaching visual literacy strategies prior to implementing critical media literacy.

No relationship was found between "Frequency of Teaching" and "Teaching Importance" as well as "Student Learning Importance." The data suggests clear support for students to learn these strategies as well as English Language Arts teachers accepting the responsibility to teach them. However, this support does not lead to actual practice. This situation calls for not only a focus on teacher education opportunities on the necessary critical media literacy skills to evaluate online information themselves but also acquiring media literacy pedagogy to effectively teach these strategies to students. The continual advancement of technological innovation leads to the need for new literacies and practices (Leu et al., 2004). Thus, our current information saturated society requires an evaluation of school curricula to determine whether current students are receiving adequate educational opportunities relevant to engaging with information in digital environments.

Limitations

Although the number of respondents is a limitation of the study, the researcher felt 77 is an acceptable number as the study reports descriptive statistics and a Pearson product-moment. However, the number of respondents prevented a potential factor-analysis on the survey. Furthermore, 51 questions could be considered a lengthy web survey. However, to gain a comprehensive snapshot of teacher's attitudes toward teaching media literacy, importance of students to learn these strategies, frequency of teaching, and instructional practices, 51 questions were necessary.

CONCLUSION

The goal of this study was to explore the attitudes and perceptions of secondary English Language Arts teachers regarding teaching students strategies to evaluate online information. English Language Arts teachers are constantly challenged with daunting curricular demands. This includes providing a

challenging, rigorous, and inclusive environment for different level readers, implementing effective writing and grammar instruction, and providing vocabulary enrichment. With these demands along with preparing students to succeed with state mandated reading and writing standardized tests, it would seem as though media literacy would be considered an additional burden on teaching time.

Conversely, participants reported overwhelming support for students to learn strategies to evaluate online information as well as secondary ELA teachers to teach these strategies. However, it is unclear whether the study participants are representative of the participating county's population. Only 77 out of 635 teachers provided answers to the survey. This is less than 1/8 of the population. With the attention to fake news in popular culture and the increasing number of teens having access to digital devices and instant information, evaluating online information has become a relevant topic in today's society. With evaluating online information and fake news being such a relevant, timely, and politicized issue, interpretation of study results should be viewed with caution as the study participants might not be reflective of the typical secondary English Language Arts teacher.

No relationships were found between "Student Learning Importance" or "Teaching Importance" with "Frequency of Teaching." This suggests relevance does not determine frequency of classroom integration, leaving the researcher wondering if teachers are truly equipped with the necessary skills to teach evaluating online information strategies to students. Are teachers properly prepared to teach evaluating online information and/or critical media literacy through their pre-service teacher education programs and/or professional development for current teachers? Further, are there opportunities for teachers to experience effective professional development and/or job-embedded coaching on critical media literacy from knowledgeable teacher educators?

Another potential explanation aside from lack of adequate teacher preparation is that teachers shied away from the political connotations that are associated with evaluating online information or "fake news" in popular culture.

It is also questionable whether political affiliation played a role in survey responses. Although the study did not collect data about political affiliation, collecting this data would help future researchers gain greater insight about the participants who feel strongly about combatting online misinformation. Results of the survey suggest very strong positive attitudes about integrating critical media literacy skills in ELA classrooms to teach students strategies to evaluate online information. However, it is unclear of the relationship, if any, between political affiliation and responses.

To better understand the data collected in this report, further investigation about teachers' actual classroom practices is needed. While participants reported great support for integrating evaluating online information into their English Language Arts classes with both formal and informal instructional practices, this study is limited in that it does not allow participants to report specific instructional practices in great detail. Thus, it does not demonstrate what evaluating online information looks like in their classroom practice. This calls for further qualitative or design-based research including classroom observations, interviews with teachers, and a collection of classroom artifacts such as student work samples and teacher lesson plans. Additionally, the perspective of those in the minority who completed the survey but did not support integrating evaluating online information must be considered beyond quantitative data to better inform improved classroom practice.

Students must acquire the necessary strategies to evaluate online information to become effective and informed citizens. Smartphones and other digital communication technology will continuously grow in ubiquity, giving students increasingly instant access to digital information.

Teachers must make integrating strategies for students to evaluate online information a necessity to provide relevant, real-world instruction. For this to occur, more research must delve into teacher practices with integrating strategies to evaluate online information, with the goal to design effective professional development sessions, revise teaching resources, and updated curriculums in English Language Arts as well as across the other core disciplines. Although the call to integrate critical media literacy is not entirely new, it is unclear whether this call has been heard by school-based educational stakeholders such as administrators and teachers.

Researchers and practitioners must question which critical media literacy classroom practices are actually being implemented, teachers' thinking behind these instructional choices, and the effectiveness of the implemented strategies for students to evaluate online information.

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