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Measuring News Media Literacy

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Abstract

News media literacy refers to the knowledge and motivations needed to identify and engage with journalism. This study measured levels of news media literacy among 500 teenagers using a new scale measure based on Potter's 2004 model of media literacy and adapted to news media specifically. The adapted model posits that news media literate individuals think deeply about media experiences, believe they are in control of media's influence, and have high levels of basic knowledge about media content, industries, and effects. Based on measures developed to assess news media literacy, highly news literate teens were found to be more intrinsically motivated to consume news, more skeptical, and more knowledgeable about current events than their less news literate counterparts.

Keywords: *media literacy, news literacy, teenagers, survey, knowledge, industries, effects*

In 2010, veteran journalists Bill Kovach and Tom Rosenstiel described the changing demands placed on media consumers in the digital age: "Though we may little understand how, we are all assuming more control over what we know about the world beyond our direct experience. We are becoming our own editors, our own gatekeepers, our own aggregators" (Kovach & Rosenstiel 2010, 7). How we reconcile "the world outside and the pictures in our heads" is not a new concern for journalists (Lippmann 1922), but the digital age presents a new set of challenges as reliable information is increasingly hard to come by (Patterson 2013). Similarly, "information overload" is not a new concept (Blair 2011), but concerns abound about news consumers' ability to stay afloat – and news outlets' ability to differentiate journalism content – in a sea of media content (Carr 2011; Gitlin 2007; Johnson 2012; Klingberg 2008). When it comes to millennials, there is much hand-wringing over their apparent declining interest in news and civic life when faced with so many information

options (Mihailidis 2014; Poindexter 2012). Digital culture may have upended traditional definitions of news and methods of consumption (Mihailidis 2014), but recent research suggests that many media system structures remain largely unchanged despite technological disruption (McChesney 2013; Curran et al. 2012).

Making sense of all the abundance, finding the signal amidst all the noise, is a key concern of media literacy and, more recently, of research and curriculum development focused on news messages specifically. News media literacy is oriented toward understanding how and why people engage with news media, how they make sense of what they consume, and how individuals are affected by their own news consumption. For professional journalism, improving news literacy is partly a matter of economic survival, a way of sustaining demand for the type of content professional journalists provide, but also of fulfilling its role to help citizens be adequately informed to participate in democratic life.

Developing ways to improve young people's news media literacy has been the focus of much recent attention among scholars, educators, and news

professionals (Adler 2014; Ashley et al. 2013; Fleming 2013; Hobbs 2010a, 2010b, 2011; Loth 2012; Mihailidis 2011; Malik, Cortesi & Gasser 2013). There is broad agreement among American high school civics and government teachers that students should know how to identify, gather, and produce credible information, and many teachers want more training and support in covering these topics (Kawashima-Ginsberg 2014). News literacy efforts are spreading across the country, driven partly by new Common Core education standards, and philanthropic groups are increasingly eager to provide support (Bui 2013; Adler 2014). But among this recent activity, common definitions and approaches have been scarce, making it difficult to compare and analyze curriculum effectiveness and research results. Thus, with a focus on teens, this study sought to create a measure of news media literacy that can be used to further our understanding of what constitutes news media literacy, examine relationships between news literacy and other variables of interest such as news use and political knowledge, and to help evaluate and improve education and training programs. Adapting a model of media literacy (Potter 2004) to news media specifically, this study tested for levels of news media literacy and examined characteristics of individuals with high and low levels of literacy.

Literature Review

While no single definition of media literacy has been consistently employed by scholars and educators (Christ 2004; Hobbs & Jensen 2009; Potter 2010), approaches tend to center on enhancing critical thinking (Silverblatt 2008), analysis and evaluation (Aufderheide & Firestone 1993; Hobbs 2010), and conscious processing (Potter 2004) of mediated messages. Many researchers and educators also include the ability to produce media messages as an important component of literacy (Aufderheide 1993; Hobbs 2010). Research suggests that media literacy educational interventions are often successful and have positive effects on media knowledge, criticism, perceived realism, influence, behavioral beliefs, attitudes, self-efficacy, and behavior (Jeong, Cho & Hwang 2012).

Research to develop methods for studying and evaluating the usefulness and effectiveness of media literacy education continues to grow (Hobbs & Frost 2003; Duran 2008; Vraga, Tully & Rojas 2009; Ashley et al. 2010). Indeed, the need to assess the effectiveness of media literacy education in general has been one of the main concerns in the field (Martens 2010; Potter 2004). Such assessments have been complicated, however, by the range of ad hoc approaches and different definitions and measures employed, which make it difficult to compare results across studies or over time. In explicating his cognitive theory of media literacy, Potter (2004) suggests that such a theory is necessary to help establish a basis for evaluation of media literacy interventions. Potter argues that advancing media literacy education may even be dangerous without an appropriate understanding of what it is meant to accomplish and how and why it will do this. “Media literacy is a concern that demands we do something. However, doing something before we are clear about what we need to do is not likely to decrease the risks of harmful effects, and it may end up making the situation worse” (Potter 2004, 39).

Scholars and educators in the emerging subfield of “news media literacy,” in which media educators apply the broad goals and frameworks of media literacy to news content (Hobbs 2010; Mihailidis 2011), face similar challenges. Although news content has long been fodder for examination in educational settings, scholars and educators are only beginning to formalize goals and applications for news media literacy (Ashley et al. 2013; Fleming 2013), even as news media literacy programs are being deployed in schools and colleges.

Media literacy centers on the idea that media representations of reality are often incomplete or inaccurate (Hobbs & Frost 2003; Kellner & Share 2005; Thoman & Jolls 2004). News media content is no less immune from this shortcoming than other forms of media (Shoemaker & Reese 1996; Shoemaker & Vos 2009). But news, unlike other media content, is expected to do the job of informing self-governing citizens (Christians, Glasser, McQuail, Nordenstreng & White 2009), a role that faces mounting challenges as traditional news outlets shrink and disappear, and emerging digital media products demonstrate both the promise and the perils

of information online. Thus, research suggests that news audiences could be better equipped to access, evaluate, analyze, and create news media products if they had a more complete understanding of the conditions in which news is produced.

A Model of News Media Literacy.

James Potter's (2004) cognitive model of media literacy provides the theoretical framework for this study. Potter's model is useful because it considers several factors affecting overall literacy, including the knowledge that is necessary to be prepared for media exposure as well as the ways in which individuals process information once exposed. Potter argues that his model requires more "conscious processing of information" and "preparation for exposures" than earlier conceptualizations of media literacy (2004, 68). We adapted this model to address news media literacy specifically. Our adaptation focuses on two of the three main components of the model, leaving aside the part addressing outcomes, such as the ability to produce messages, that would pose practical difficulties in survey construction and administration.

In Potter's model, five basic "knowledge structures" – knowledge about media content, media industries, media effects, the real world, and the self – interact with a person's combination of drives, needs, and intellectual abilities (called the "personal locus") that govern information processing and constructing meaning from that information. According to Potter, "With knowledge in these five areas, people are much more aware during the information-processing tasks and are, therefore, more able to make better decisions about seeking out information, working with that information, and constructing meaning from it that will be useful to serve their own goals" (2004, 69). The more robust knowledge structures and personal locus, the higher an individual's level of media literacy.

In terms of news media literacy specifically, knowledge about content, industries, and effects includes such information as the values that underlie news and how it is constructed; the impact of news media economics, ownership, and control on news content; and the consequences, both positive and negative, of news media exposure. Knowledge of the "real world" refers to a person's knowledge of reality as compared to news media depictions of

reality, which are often incomplete, inaccurate or distorted. Reliance on such distortions can increase a person's risk for negative effects, as Potter points out (2004, 92). Knowledge of the self refers to one's awareness of their motivations for seeking news content and the degree to which they internalize news media messages. This self-awareness requires knowledge of one's own cognitive, emotional, and moral development as well as one's conscious and unconscious personal goals for obtaining information.

Other research regarding the relationship between motivations for news media use and knowledge gained from that use supports these basic propositions of Potter's model. A test of the cognitive mediation model, for example, demonstrated that motivations for news media use influence how news media content is processed and that that processing, in the form of focused attention during news exposure and subsequent elaboration on the news, produces learning (Eveland 2002). (In the model, elaboration incorporates reflection on and interpretation of the news to which one is exposed.) While Eveland's research examined how people learn from news and not what people know about news, the results underscore the importance of motivation and information-processing skills to one's ability to make sense of news messages.

Motivations and Control. The personal locus part of Potter's model includes such concepts as mindfulness, self-efficacy, and competence, which influence motivation for news consumption and ultimately interplay with news media system knowledge to influence one's overall level of news media literacy. For example, need for cognition – a psychological tendency to enjoy thinking – has a significant impact on media use motivations (David 2009). Also, individual differences in motivation were linked to differential learning from the news. These results further signal the importance of including motivation in a model of news media literacy.

Links between news exposure and knowledge and such psychological variables also have been explored in previous research, especially regarding young people who are the primary targets of literacy curricula and interventions. Eynon and Malmberg (2012) examined two variables, online information-

seeking skills and self-concept for learning, as part of a larger model of young people's online information-seeking behavior. They found that teenagers with a stronger self-concept undertook more information-seeking activities and that their perceptions of having good information-seeking skills were linked to greater use of the Internet for homework purposes. Similarly, Livingstone and Helsper (2010) found that Internet literacy, defined in terms of the ability to undertake a variety of tasks online, was an important mediator of young people's online experiences, particularly their ability to benefit and/or encounter risks from Internet use. The measure of self-efficacy used in the study did not yield significant results, an outcome the researchers speculated could have been attributable to social desirability bias or use of a single response measure. Actual skills, in this case, could also be a better indicator of self-efficacy than self-reported perceptions of it.

Greater enjoyment for thinking and self-efficacy in information-seeking and news consumption have the potential to increase intrinsic motivation to consume news. Self-determination theory (Ryan & Deci 2002) suggests social norms – such as the habit of consuming news – are intrinsically motivated when individuals integrate them into their own self-concepts. People are amotivated, on the other hand, when they “lack either a sense of efficacy or a sense of control with respect to a desired outcome” (Deci & Ryan 2000, 237). This suggests that being mindful and feeling in control of one's own news consumption will relate to a greater sense that “being a news consumer” is a core part of one's self-concept.

Trust and Skepticism. The research literature includes a number of studies addressing other variables included in Potter's model or that are conceptually related. Previous research, for example, has considered whether and how news exposure is related to one's level of trust in (or skepticism about) the news media. Tsfaty and Cappella (2003), using Gaziano and McGrath's (1986) News Credibility Scale as an indicator of trust, found that greater exposure to mainstream news media was linked to higher levels of trust. The findings in a later study (Tsfaty 2010) that also included nonmainstream, online news sources were less clear, but seemed to

suggest similar results: greater skepticism led to less exposure. Motivation plays a role here too. Need for cognition (NFC) was found to be a significant moderator of the relationship between skepticism and exposure to mainstream news media such that for people with extremely low NFC, skepticism resulted in less exposure (Tsfaty & Capella 2005). The link between exposure and skepticism is relevant to the present study, but the possibility that news media skepticism may be ill-informed – one can be skeptical of news based on faulty assumptions or lack of knowledge about news gathering practices, for example – means that media skepticism alone would be a poor indicator of news media literacy.

Applied to news media literacy, Potter's model would suggest, then, that greater knowledge about what is in the news, the conditions under which news is produced, and the effects news can have on people, as well as greater control and consciousness regarding news consumption, will result in higher levels of news media literacy. The model also helps us examine the interplay between knowledge structures and the personal locus. For example, if a person is driven to consume news but lacks solid knowledge structures about it, they won't be able to make much sense of what they have consumed. Conversely, the news media literacy of someone with solid knowledge structures but little motivation to process the news would be diminished.

Measuring News Media Literacy. Our primary objective was to adapt Potter's model to address news media literacy specifically and thereby create a way to gauge individuals' levels of news media literacy, distinguish between those with higher and lower levels of literacy, and begin to identify how the individual components of literacy as conceptualized in the model contribute to overall news media literacy. Related objectives include identifying gaps in news media literacy that can be addressed via educational and other interventions and establishing the extent to which level of news media literacy is correlated with attitudes and behaviors related to news media use and democratic citizenship. Our primary objective is reflected in the following research question:

RQ1: Does a series of measures developed from Potter's cognitive model distinguish between

teens with higher and lower levels of news media literacy?

Next, we developed four specific hypotheses to test the relationships that Potter's model, as adapted for news media, predicts. We hypothesized:

H1: Highly news literate teens will be more intrinsically motivated for news consumption relative to their less news media literate peers.

H2: Highly news literate teens will be more skeptical of news media relative to their less news media literate peers.

H3: Highly news literate teens will consume more news relative to their less news media literate peers.

H4: Highly news literate teens will be more knowledgeable about current events relative to their less news media literate peers.

Finally, reflecting our interest in exploring the demographic characteristics of individuals with high and low levels of news media literacy, we posed this research question:

RQ2: What demographic characteristics describe highly news media literate teens relative to their less news media literate peers?

Method

Clustering Procedures. Potter's model suggests that media literate individuals think deeply about their media experience, believe they are in control of media's influence, and have a high degree of basic knowledge about media content, industries, and effects. Therefore, instruments needed to be developed and adapted to measure these constructs and aid in classifying respondents according to their news media literacy.

The first, the degree to which one engages in mindful versus automatic thought-processing of news, was based on previous cognitive processing literature's focus on need for cognition, an individual difference. Specifically, we used a shortened, five-item NFC scale used in previous research (Epstein et al. 1996) to measure this concept ($\alpha = .780$). Respondents were asked to respond to each of the

statements by saying how much they agreed with it on a five-point scale (1=strongly disagree; 5=strongly agree). Items included "I prefer complex to simpler problems" and "I don't have to do a lot of thinking" (See Appendix 1). Some items were reverse-coded so that a higher score indicated greater NFC. A mean was computed to develop an overall NFC score.

The second, the degree to which one perceives themselves as being in control of whether and how news media influences, was based on psychological research examining locus of control. This extensively researched construct assesses the extent to which individuals believe they can affect the factors that influence their lives. We adapted a scale previously used to measure the extent to which an individual feels they are in control of their own health (Wallston & Studler Wallston 1978) to measure "media locus of control." This measure gauges the extent to which an individual believes they control media influences. The scale included six items ($\alpha = .635$). Respondents were asked to respond to each of the statements by saying how much they agreed with it on a five-point scale (1=strongly disagree; 5=strongly agree). Items included "I am in control of the information I get from the news media" and "If I pay attention to different sources of news, I can avoid being misinformed" (See Appendix 2). A higher score indicated a more intrinsic media locus of control. A mean was computed to develop an overall MLOC score.

The third was based on what Potter calls "knowledge structures," specifically about three areas: the institutions that produce news, the way in which the content of the news is produced, and the awareness of possible effects of that content on people. We created an index to assess these areas of knowledge, using multiple-choice questions about each of these categories. Each question had only one correct answer. For example, questions about news-producing institutions included knowing that most American news media are for-profit businesses, knowing that the number of companies that own media has decreased over the last three decades, and knowing that journalists are not required to be individually licensed in the U.S. Questions about the news content category included knowing that news coverage tends to underestimate the proportion of

minorities in the U.S. and that political campaigns tend to be covered like horse races instead of focusing on in-depth issues about the candidates. Finally, questions about media effects included knowing that people who watch more television news tend to think the world is more violent than it really is and that people tend to think that media have greater effects on others than themselves. In total, 15 multiple-choice questions were asked (See Appendix 3 for all questions). An index was computed by summing the number of correct answers for each respondent.

Using these three scale and index scores, we conducted a two-step cluster analysis. Cluster analysis is a statistical technique used to determine how different cases in a dataset “cluster” or group together based upon the cases’ scores on selected variables (Mooi & Sarstedt 2011; Kaufman & Rouseeuw 2005; Romesburg 2004); in other words, cluster analysis provides the researcher “with clusters that are as different from each other as possible, with the members within each cluster as similar to each other as possible” (Ammon, Bowman & Mourad 2008, 34). In this study, the technique helped analyze how individual survey respondents’ need for cognition, media locus of control, and news media system knowledge scores were similar to one another for each respondent. Ultimately, the analysis classified respondents into two groups: high and low news media literacy. The highly new media literate (N=257) indeed scored higher on all three clustering variables, whereas their lower news media literate peers (N=251) scored lower (see Table 1).

Dependent Measures. The first research question and related hypotheses posited relationships between the two news media literacy groups and their levels of intrinsic motivation, news media skepticism, news use, and current events knowledge.

Questions measuring motivations were based on Self Determination Theory, used by psychologists to study the extent to which one sees an activity as part of his or her core self-concept (Ryan & Deci 2002; Grolnick, Deci & Ryan 1997). We adapted an item from previous work (Koestner, Losier, Vallerand & Carducci 1996; Vallerand & O’Connor 1989) to determine the extent to which respondents thought that consuming news was part of how they

defined themselves. Specifically, respondents were asked the extent to which they agreed (1=strongly disagree; 5=strongly agree) with the statement, “I follow the news because I like to.” A higher score indicated a respondent was more intrinsically motivated for news consumption.

Next, news media skepticism was used to measure overall distrust in the news media. In total, eight statements were presented to respondents ($\alpha=.701$). These items included statements about whether respondents thought the news media are fair, tell the whole story, are accurate, can be trusted, get in the way of society solving its problems, and whether news media prioritize being the first to report a story. We also asked respondents whether they thought media report the news fairly and if they have confidence in individuals running press institutions. These questions were based on previous research work in media confidence and credibility (Tsfati 2003a, 2003b; Tsfati & Cappella 2003, 2005). Respondents used a five-point scale (1=strongly disagree, 5=strongly agree) to indicate the strength of their agreement or disagreement with each statement. Some items were reverse-coded so that a higher score indicated a respondent was more skeptical of the news media. A mean score was computed from all the variables to create one overall news media skepticism score.

News use was measured by asking respondents the number of minutes in a typical weekday they used newspapers, television, radio, and the Internet for news consumption. Finally, current events knowledge was measured by asking a series of seven current events questions, adapted from the then-current Pew Research Center’s (2012) News IQ Quiz. Items included, for example, knowing that Joe Biden is the vice president of the United States, knowing that Mitt Romney was the presidential candidate who supported restricting access to abortion in most cases, and knowing the then-current national unemployment rate. Respondents were presented with multiple-choice questions, and the total number of correct answers for each respondent was recorded as an overall current events knowledge score.

The second research question asked how high and low news media literate teens differed demographically. To answer this question, we asked

respondents to indicate their ages, races, and genders. To assess socioeconomic status, another important demographic variable, we asked respondents to indicate the highest level of education at least one parent had completed.

Sampling and Clustering Procedures. We conducted a phone survey with teenagers between the ages of 14 and 17 living in a large metropolitan area. As teenagers are the focus of many, if not most, media literacy interventions and programs, they are an appropriate population on which to test the news media literacy scale. The fact that this sample of teenagers was drawn from an urban population does present some potential limitations of the study that will be addressed in the discussion.

We purchased a list from a marketing research firm of randomly sampled landline and cell phone numbers believed to belong to households that included a teenager within our targeted age range of 14 to 17 years. The list of numbers was created to be proportional to the population of each of the zip codes in the metropolitan area. Of this sample of 13,032 phone numbers, 58 percent (7,591) were unusable (due to disconnected or fax numbers) or went unanswered in 15 attempts to connect. Just over 28 percent (3,664 of 13,032 numbers) were for households without any members between 14 and 17 years of age and were therefore ineligible, while another 4 percent (552) connected to households where a language or other communication barrier inhibited interviewers' ability to complete the contact. At least 15 attempts were made to complete an interview at every sampled number; refusals were recontacted at least once. In total, 508 interviews were completed out of 1,225 contacts, for a response rate of 41.46%. When contact was made with an eligible household, parental consent was obtained before the questionnaire was administered to the teenaged respondent.

Results

Our first research question asked whether the series of measured based on Potter's cognitive model of media literacy and described above – namely need for cognition, media locus of control, and media knowledge structures – could be used to distinguish

between higher and lower levels of news media literacy. The a priori theoretical division of teenagers into two groups was supported by cluster analysis. While the reported cluster quality (Silhouette coefficient=0.4) was less than ideal, it was still in the fair range (Kaufman & Rousseeuw 1990). Relative to each other, the high and low news media literacy groups differed significantly in mean scores on each of the three classification variables (See Table 1).

Table 1
Mean Scores on Clustering Variables

	Low News Media Literacy (N=257)	High News Media Literacy (N=251)
Need for cognition	3.01	4.08
Media locus of control	3.13	3.95
News media system knowledge	5.89	9.22

To test the first hypothesis, which predicted that highly news media literate teens would be more intrinsically motivated for news consumption, we conducted an analysis of covariance. The ANCOVA for high versus low news media literacy grouping on intrinsic motivation, controlling for demographic variables described in earlier analyses, was statistically significant ($F(1,432) = 8.91, p < .01$). Specifically, those who were in the high news media literacy group had higher intrinsic motivation scores ($M=3.53, SE=.08$) than those in the low news media literacy group ($M=3.16, SE=.08$). Therefore, Hypothesis 1 was supported.

The second hypothesis predicted that highly news media literate teens would be more skeptical of the news media than those in the low news media literacy group. The ANCOVA for high versus low news media literacy grouping on intrinsic motivation, controlling for demographic variables, was statistically significant ($F(1,432) = 7.41, p < .01$). Specifically, those who were in the high news media literacy group had higher news skepticism scores ($M=3.19, SE=.04$) than those in the low news

media literacy group ($M=3.02$, $SE=.04$). Therefore, Hypothesis 2 was supported.

The third hypothesis predicted that highly news media literate teens would consume more news media than their less news media literate peers. This was tested with multivariate analysis of covariance. After using the demographic variables mentioned above as covariates, there was no multivariate effect on news media use. Additionally, individual univariate tests revealed no significant difference between the two news media literacy groups in the amount of time they consume any individual news medium. Therefore, Hypothesis 3 was not supported.

Finally, Hypothesis 4 predicted that highly news media literate teens would be more knowledgeable about current events than their less news media literate peers. The ANCOVA for high versus low news media literacy grouping on current events knowledge, controlling for demographic variables, was statistically significant ($F(1,431) = 59.05$, $p < .001$). Specifically, those who were in the high news media literacy group correctly answered more current events questions ($M=6.09$, $SE=.08$) than those in the low news media literacy group ($M=5.21$, $SE=.08$). Therefore, Hypothesis 4 was supported.

Table 2
Crosstabulation of Gender & News Media Literacy

Gender	News Media Literacy Grouping		X^2
	Low News Media Literacy	High News Media Literacy	
Male	115 (0.1)	119 (-0.1)	.031
Female	116 (-0.1)	124 (0.1)	

Note: Standardized residuals appear in parentheses below group frequencies.

To answer the second research question, which asked about the demographic differences between the two news media literacy groups, we used chi-square tests for independence. There was no relationship between gender and being in either news media literacy group ($X^2 (1, N = 474) = 0.031$, $p =$

.860). Each news media literacy group comprised roughly equal numbers of males and females (See Table 2).

As for age, the highly news media literate were slightly older ($M=15.67$, $SD=1.08$) than their less news media literate peers ($M=15.32$, $SD=1.07$; $t(502) = -3.61$, $p < .001$).

As for race, because some groups were too small for chi-square analysis, we dichotomized the variable to indicate white versus non-white. A chi-square test of independence was performed to examine the relation between this race variable and news media literacy grouping. The relation between these variables was significant, ($X^2 (1, N = 503) = 16.82$, $p < .001$). White teens were more likely to be in the high news media literacy group than non-white teens (See Table 3).

Table 3
Crosstabulations of Race and News Media Literacy

Race	News Media Literacy Grouping		X^2
	Low News Media Literacy	High News Media Literacy	
White	125 (0.1)	172 (-0.1)	16.818 ***
Non-White	125 (2.2)	81 (-2.2)	

Note: *** $p < .001$. Standardized residuals appear in parentheses below group frequencies.

With parental education, some groups were too small for analysis, so data were reduced into three categories: less than college, some college or college graduate, and graduate school. A chi-square test of independence was performed to examine the relationship between this parental education variable and news media literacy grouping. The relation between these variables was significant, ($X^2 (2, N = 477) = 19.99$, $p < .001$). Teenagers with parents who did not attend college were more likely to be in the low news media literacy group, and those with parents who had attended at least some college were more likely to be in the high news media literacy group (See Table 4).

Table 4
Crosstabulations of Parental Education and News Media Literacy

Parental Education	News Media Literacy Grouping		X ²
	Low News Media Literacy	High News Media Literacy	
Less Than 63 College	29 (2.9)	29 (-2.8)	19.987 ***
Some College/ College	99 (-1.0)	131 (1.0)	
Graduate	65	90	
School	(-1.0)	(1.0)	

Note: *** $p < .001$. Standardized residuals appear in parentheses below group frequencies.

Table 5
Crosstabulations of Experience with Youth Media & News Media Literacy

Gender	News Media Literacy Grouping		X ²
	Low News Media Literacy	High News Media Literacy	
Experience with youth media program	46 (0.0)	47 (0.0)	.000
No experience with youth media program	205 (0.0)	210 (0.0)	

Note: Standardized residuals appear in parentheses below group frequencies.

journalism publication. There was no relationship between being in the high or low news literacy group and having been involved in youth media programs ($X^2 (1, N = 508) = 0.000, p = .991$). The respondents with youth media experience were almost exactly evenly divided between the high and low news media literacy groups; those without youth media experience were also evenly divided between the two groups (See Table 5).

Discussion

This study sought to adapt Potter's cognitive model of media literacy to news media literacy, to test the relationships between knowledge and individual differences suggested by that model, and, thereby, to begin to develop a measure of news media literacy useful in creating and evaluating training programs and curricula as well as examining correlations among news media literacy, news media use and other variables. The results provide support for all those aims.

Our findings suggest that Potter's model provides a useful framework for defining and assessing news media literacy. In our phone survey of more than 500 teenagers, Potter's five basic knowledge structures – knowledge about media content, media industries, media effects, the real world and the self – combined with a person's collection of drives, needs, and intellectual abilities (called the personal locus) do indeed form the basis for an individual's level of news media literacy and capacity for active, conscious processing of information. News literate teens are defined by their intrinsic motivations toward news consumption, greater skepticism about the news content they receive, and greater knowledge about current events. They are also likely to be more selective and proactive in choosing what news to consume, as evidenced by the lack of support for H3, which predicted that teens with high levels of news media literacy would consume more news than teens with low literacy levels. The teenagers in our survey all consumed similar amounts of news, but, as the findings regarding current events knowledge indicate, news literate teens seem to do a better job of selecting news that is useful. It is also possible that these teens have different and even competing

Finally, we asked respondents if they had any experience with media or journalism education programs, such as working for a high school

understandings of what “news” is in the first place. Finally, demographically, it is unsurprising but important for policy and program planning purposes that news literate teens come from households with higher levels of parental education.

Our study draws together existing research in media literacy (Christ 2004; Hobbs & Jensen 2009; Potter 2010) and journalism (Shoemaker & Reese 1996; Shoemaker & Vos 2009), as well as what motivates news consumption (e.g. Tsftati & Cappella 2005) and how that news is processed (e.g. Eveland 2002; Eynon & Malmberg 2012). Our work, then, brings deeper specificity to existing definitions and assessments of news media literacy (Hobbs 2010a; Mihailidis 2011). It builds on existing evidence that suggests a thorough understanding of the media landscape helps students engage with media to achieve pro-social and personal goals. Moreover, the measure’s ability to distinguish not only between teens with high and low levels of news media literacy but also to help us understand the relative contributions of two key aspects of literacy – the knowledge structures and the personal locus – to one’s overall level of news media literacy is of particular practical and theoretical benefit.

On the theoretical side, the interplay between knowledge structures and the personal locus has implications for how we might think about news media use, media skepticism, and variables related to civic knowledge and engagement. To offer one example: How do we account for the fact that news literate teens consume no more news than their less news literate peers? We need to know more not just about which news media sources they are using, but also how they came to choose those sources and the role, if any, that skepticism played in those choices. Is their skepticism more informed than less literate teens’ skepticism?

On the practical side, in creating and validating a measure of news media literacy, we have developed a tool for educators, policymakers, and others who are interested in building news media literacy. The measure could, for example, be used to evaluate outcomes of particular curricula aimed at boosting news analysis skills. It also might serve as a diagnostic tool, helping educators determine where to focus their energies in news media literacy instruction – on knowledge structures? Motivations?

Both? It also could be used to examine and compare outcomes of programs aimed at developing analytical skills with those focused on production skills.

No study is without limitations, and this research is no exception. Our study sampled from a large metropolitan area, and it did so around the time of a national election during which the salience of political news is more pronounced than other times, which could have an impact on news use and current events knowledge. While the more news media literate teens in this study were more knowledgeable about current events, it is possible that results would vary – and could in fact be intensified – for young people living in areas that are not as media dense and/or have fewer available news resources than an urban setting.

Young people certainly have new and changing ways of defining and accessing news. This creates certain challenges when trying to gauge knowledge and attitudes related to constructs that continue to shift. However, if a theory is good for anything, it should be able to tolerate these ongoing shifts. A measure based on such a theory will never be perfect, but barring a total transformation of society, it can still be made reasonably relevant if the theoretical ground is solid. In this case, we find that digital disruption, rather than radically altering the media landscape, has actually solidified existing structural features related to ownership and control (McChesney 2013; Curran et al. 2012), which are among the features we have sought to measure. Indeed, future definitions and measures of news media literacy should examine their connection to modern young minds, and that is what we have attempted to do for now.

It is also important to note that our adaptation of Potter’s model did not include a third set of factors called skills and competencies, essentially the demonstration and application of media literacy skills, such as the ability to interpret and create messages. While acquiring the skills needed to produce a media message is part of many scholars’ and practitioners’ definitions of media, digital and related literacies (Hobbs 2010a, 18), skills application is not easily evaluated via the type of measure we sought to create, which would lend itself to wide administration without the need for

subjective grading. Certainly trainers and educators could use the measure tested in this study in conjunction with other techniques focused on evaluating specific outcomes such as videos and websites or assessing individual interpretations of particular news messages.

To be sure, more work needs to be done. The measure needs to be tested with, and perhaps tweaked for, both older and younger populations. Research exploring influences on news media literacy other than the demographics we examined here also should be conducted. Because our study used a phone survey to collect responses, we were limited by the types of questions we could ask in such a setting and the overall time it takes to administer each questionnaire. Other research methods such as experiments and ethnography might find ways to avoid the problems inherent in relying on self-report in surveys. Scholars should also consider alternate ways of assessing news use that might better tap into the relationship between literacy and news use choices. Incorporating self-

evaluations of news literacy and the bases for those evaluations also might prove useful in fleshing out those relationships. Future work should also explore how news media literacy predicts other pro-social individual characteristics, such as political and civic engagement. Finally, the idea of news continues to undergo certain transformations as economic, technological, and cultural disruptions continue to unfold. Future research should continue to take stock of such changes and make necessary adjustments.

For now, we hope our work can help to serve the vital needs of young people as they safely navigate the sea of news and information rather than drowning in the tidal wave. As Hobbs notes, “We look to digital and media literacy to help us more deeply engage with ideas and information to make decisions and participate in cultural life” (2010a, ix). Our study adds news media literacy to the array of competencies required to survive and thrive in today’s media environment.

Appendix 1

Questions about Automatic vs. Mindful Thought Processing

On a scale of 1 to 5 where 1 is strongly agree and 5 is strongly disagree, please tell me how much you agree or disagree with this statement.

1. I don't like to have to do a lot of thinking. (reverse-coded)
2. I try to avoid situations that require thinking in depth about something. (reverse-coded)
3. I prefer to do something that challenges my thinking abilities rather than something that requires little thought.
4. I prefer complex to simple problems.
5. Thinking hard and for a long time about something gives me little satisfaction. (reverse-coded)

Appendix 2

Questions about Media Locus of Control

On a scale of 1 to 5 where 1 is strongly agree and 5 is strongly disagree, please tell me how much you agree or disagree with this statement.

1. If I am misinformed by the news media, it is my own behavior that determines how soon I will learn credible information.
2. I am in control of the information I get from the news media.
3. When I am misinformed by the news media, I am to blame.
4. The main thing that affects my knowledge about the world is what I myself do.
5. If I pay attention to different sources of news, I can avoid being misinformed.
6. If I take the right actions, I can stay informed.

Appendix 3

Questions about News Media Knowledge Structures

1. Most media outlets in the United States are: a.) For-profit business (correct); b.) Owned by the government; c.) Non-profit businesses; d.) Don't know
2. If you wanted to get a job as a news reporter in the US, you would need to get a license from... a.) The Federal Communications Commission; b.) The Federal Trade Commission; c.) Society of Professional Journalists; d.) News reporters are not required to be licensed (correct); e.) Don't know
3. In 1983, around 50 companies owned most of the media outlets Americans consumed. How many companies own most of the media we consume today? a.) 100; b.) 50; c.) 25; d.) 5 (correct); e.) Don't know
4. Which of the following cable news networks is generally thought to have a politically conservative bias? a.) CNN; b.) Fox News (correct); c.) MSNBC; d.) MTV News; e.) Don't know
5. Which of the following news outlets does NOT depend primarily on advertising for financial support? a.) CNN; b.) PBS (correct); c.) The New York Times; d.) Newsweek magazine; e.) Don't know
6. When it comes to reporting the news, the main difference between a website like Google News and a website like CNN.com is that: a.) Google does not have reporters who gather information, while CNN does (correct); b.) Google focuses on national news, while CNN focuses on local news; c.) Google has more editors than CNN does; d.) Google charges more money for news than CNN does; e.) Don't know
7. Who has the most influence on what gets aired on the local TV news? a.) Individual reporters; b.) The anchor, the person reading the news; c.) The cameraman; d.) The producer/editor (correct); e.) Don't know

8. The amount of racial/ethnic minority coverage in the news: a.) Accurately reflects the proportion of minorities in the U.S. population; b.) Under-represents reflects the proportion of minorities in the U.S. population (correct); c.) Over-represents reflects the proportion of minorities in the U.S. population; d.) Don't know
9. Coverage of election campaigns in the news usually centers on: a.) Who's winning (correct); b.) In-depth analysis of where candidates stand on the issues; c.) The candidates' educational backgrounds; d.) Don't know
10. One common criticism of the news is that it is not objective. What do people who make that criticism typically mean by it? a.) The reporter gives only the facts about the story; b.) The reporter puts his or her opinion in the story (correct); c.) The reporter's story relies too much on the opinions of people who are neutral; d.) The reporter doesn't make the purpose of the story clear; e.) Don't know
11. Writing a press release is typically the job of: a.) A reporter for CNN.com; b.) A spokesperson for Coca-Cola (correct); c.) A lawyer for Yahoo!; d.) A producer for NBC Nightly News; e.) Don't know
12. Most people think the news has: a.) A greater effect on themselves than other people; b.) A greater effect on other people than themselves (correct); c.) The same effect on themselves as others; d.) Does not have any effects on anyone; e.) Don't know
13. People who watch a lot of television news often tend to think the world is: a.) More violent and dangerous than it actually is (correct); b.) Less violent and dangerous than it actually is; c.) Just as violent and dangerous as it actually is; d.) Don't know
14. If a topic gets a lot of coverage in the news, people who pay attention to the news are: a.) More likely to think the topic is important (correct); b.) Less likely to think the topic is important; c.) Neither more nor less likely to think the topic is important; d.) Don't know
15. Most news outlets depend on advertising to make money. What is a possible effect of this? a.) News could encourage people to buy things they don't need; b.) News could emphasize things that aren't really important; c.) All of the above (correct); d.) None of the above. There are no effects; e.) Don't know

Appendix 4

Questions Measuring Outcome Variables

Motivations for News Consumption

On a scale of 1 to 5 where 1 is strongly agree and 5 is strongly disagree, please tell me how much you agree or disagree with this statement.

1. I don't see what news does for me.
2. I follow the news because I'm supposed to.
3. I follow the news for my own good.
4. I follow the news because I like to.

News Media Skepticism

On a scale of 1 to 5 where 1 is strongly agree and 5 is strongly disagree, please tell me how much you agree or disagree with this statement.

1. I think the news media are fair. (reverse-coded)
2. I think the news media tell the whole story. (reverse-coded)
3. I think the news media are accurate. (reverse-coded)
4. I don't think the news media can be trusted.
5. I think the news media prioritize being first to report a story.
6. I think the news media get in the way of society solving its problems.
7. I trust the media to report the news fairly. (reverse-coded)

8. I have confidence in the people running the institutions of the press. (reverse-coded)

News Media Use

On a typical weekday, do you read a daily newspaper, or not?

If yes, about how much time do you spend reading a daily print newspaper on a typical weekday?

On a typical weekday, do you watch the news or any news programs on television, or not?

If yes, about how much time do you spend watching the news or any news programs on television on a typical weekday?

On a typical weekday, do you listen to the news or any news programs on radio, or not?

If yes, about how much time do you spend listening to the news or any news programs on the radio on a typical weekday?

On a typical weekday, do you get any news online through the Internet, or not?

If yes, about how much time do you spend getting news online on a typical weekday?

Current Events Knowledge

1. Who is Joe Biden? a.) Vice President (correct); b.) UN Ambassador; c.) Governor of Illinois; d.) Don't know
2. Which presidential candidate is PRO-LIFE, that is, supports restricting access to abortion in most cases? a.) Obama; b.) Romney (correct); c.) Neither; d.) Don't know
3. Which presidential candidate supports allowing many illegal immigrants who were brought to the U.S. as children to remain in the country? a.) Obama (correct); b.) Romney; c.) Both; d.) Don't know
4. Which presidential candidate opposes allowing gays and lesbians to marry legally? a.) Obama; b.) Romney (correct); c.) Both; d.) Neither; e.) Don't know
5. Is the national unemployment rate as reported by the government currently closer to...? a.) 5%; b.) 8% (correct); c.) 15%; d.) 21%; e.) Don't know
6. Last month, a U.S. ambassador was killed in which country? a.) China; b.) Libya (correct); c.) Russia; d.) Israel; e.) Don't know
7. Who is the mayor of Chicago? a.) Rahm Emanuel (correct); b.) Richard Daley; c.) Valerie Jarrett; d.) Paul Ryan; e.) Don't know

Demographics

Age

Gender: Male; Female

Ethnicity: White; African American; Latino/Hispanic; Asian/Pacific Islander; American Indian; Multiracial; Other

Have you ever been involved with media or journalism education programs (such as working for a high school journalism publication)?

What is the highest level of school your mother/father has completed? Less than high school; High school/GED; Some college but no degree; Vocational/Technical/Associate/Community college degree; Four-year college degree; Post-college/advanced degree such as master's or doctoral degree; Don't Know/Not Sure

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