Measuring the Implementation of Media Literacy Instructional Practices in Schools: Community Stakeholder Perspectives

Renee Hobbs[1], Mary Moen[1], Rongwei Tang[2], and Pamela Steager[3]
[1]University of Rhode Island, Kingston RI USA
[2] University of Minnesota Twin Cities, Minneapolis MN USA
[3] Media Literacy Now Rhode Island, Providence RI USA

Abstract
Interest in media literacy education is increasing across the United States and around the world but little is still known about the prevalence of various instructional practices used to implement it in elementary and secondary schools. Surveys and semi-structured interviews with a statewide quota sample of education stakeholders included school leaders, educators, librarians, elected public officials, parents, and members of the community in all 24 school districts in Rhode Island. Results show that only a few instructional practices are implemented with most or nearly all students in the state. However, the implementation of various media literacy instructional practices varied considerably from one community to another. Importantly, differences in implementation were not due to the size of the community, its geographic location, or its socioeconomic status. Regression analysis demonstrated that nearly half the variance in implementation of media literacy instructional practices can be accounted for by obstacles including technology limitations, school policies, academic priorities, perceptions of students, and educator response.

Keywords: *media literacy education, curriculum and instruction, state-level implementation, survey research*

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In the United States, the historic legacy of local funding of schools combined with racial segregation has led to significant inequalities in public education that affect curriculum and instruction, including media literacy (ML) education, which has seen a significant uptick in implementation after the so-called fake news crisis in 2016 (Baker, et al 2021). In the United States, education policies at the state and local levels have long shaped the practice of ML curriculum requirements in schools (Hobbs 1998; Ward-Barnes 2010). State policies are often the products of grassroots organization campaigns by citizens, and states differ in their articulation of these policies (Bulger and Davidson 2018).

In 2017, Rhode Island's General Assembly passed a law that instructs the department of elementary and secondary education to consider, in consultation with national or statewide organizations, the incorporation of media literacy education into the board of education's basic education program regulations. This initiative was inspired by a variety of professional development opportunities offered to teachers and librarians across the state (Moen, 2020). During the coronavirus pandemic, school districts made a swift turn to incorporate digital literacy practices into instruction, but we wondered the extent to which media literacy learning experiences would also be included in that pivot.

For this reason, we sought to explore the levels of ML implementation in elementary and secondary education across the state of Rhode Island in the 2020-2021 academic year, recognizing that the actual implementation of instructional practices can be measured in many ways. Classroom observations, teacher logs of daily classroom practice, teacher questionnaires, and evaluation of student work samples have all been employed by education researchers to measure instructional practices in schools. But there is no perfect measurement tool for

documenting the complex phenomena of what happens in classrooms. For years, education researchers have identified significant discrepancies between the instructional practices that teachers say they use in the classroom and what observers see when visiting their classrooms (U.S. Department of Education 1999).

Because it is not feasible for researchers to observe the implementation of ML education directly in the state's many thousands of classrooms over the course of 180 days in a school year and random sampling of teachers or classrooms was out of the scope of possibility for us as well, we needed to use a different approach. In our small U.S. state, we decided to rely on the eyes and ears of the entire community, including teachers, librarians, school leaders, parents, community members, and elected public officials. We developed and implemented a statewide survey to measure ML implementation in Rhode Island schools with local education stakeholders, with the expectation that completing the survey could provide not only valuable information to local communities, but it could potentially raise statewide public awareness about what media literacy education looks like in elementary and secondary schools.

Literature Review

Multiple Stakeholders for Media Literacy Education in Schools

State laws can be powerful levers of change that enable media literacy education to thrive. In Illinois, Public Act 102-0055 became effective July 9, 2021, and it mandates that every public high school must include a unit of instruction on media literacy in its curriculum. The Illinois law defines media literacy as the ability to access, analyze, evaluate, create, and communicate using a variety of objective forms, including print, visual, audio, interactive, and digital texts (Williams 2022). In the state of Washington, the Office of the Superintendent of Public Instruction offers a media literacy grant program to support the development of

curriculum units focused on media literacy or digital citizenship, or both, which can be integrated into social studies, English language arts, or health classes, and is aligned with Washington state standards in these content areas (Action4MediaEducation 2021).

With or without the presence of state laws, implementing ML education into schools requires support from multiple stakeholders. Classroom teachers in all grade levels and content areas have been shown to integrate ML learning activities such as analyzing and creating media as cross-curricular skills (Manfra and Holmes 2020; Stein and Prewett 2009; Weninger, et al 2017). Library media specialists help students develop competency in news literacy and information literacy (Farmer 2019). School administrators can play a key role in overcoming the obstacles and limitations perceived by teachers (Baker et al. 2021; Fedorov et al. 2016; Mahoney and Kwaja 2016). Community members from media and technology organizations support media literacy initiatives when they align with their values (Hobbs 2016), and in the community, media literacy education can be seen as a civic responsibility where contributions from public officials and public librarians are important (Mihailidis & Diggs 2010). Parents also have a role to play in ML education in the home because media literacy is a part of everyday life (Rasmussen et al. 2016; Stavosa 2014). We also recognized that, due to the need for periods of isolation with hybrid instruction at home, in many communities, parents also got a much closer inside look into what their students were learning during COVID, the year this study was conducted.

Educational policies at the local, state, and national levels also influence how digital and ML education is practiced in schools. Many American students are likely to encounter digital citizenship lessons because school districts receive discounts on technology expenses when they comply with the Children's Internet Protection Act (CIPA) act, first enacted by Congress in 2000, which mandates that school administrators certify that the school or library has "educated

minors about appropriate online behavior, including interacting with other individuals on social networking websites and in chat rooms, and cyberbullying awareness and response" (Harris 2019, 137). Policies like this clearly influence the practice of media literacy in the classroom. Survey research with a nationally representative sample of K-5 teachers found that many elementary educators are teaching digital citizenship competencies as early as kindergarten. But these researchers also found significant racial disparities in who gets (and who teaches) digital citizenship lessons (Lauricella et al. 2020).

To effectively integrate media literacy across the curriculum, a conceptual understanding of the school environment as a complex adaptive system is needed. Complex adaptive systems possess "many heterogeneous components that dynamically interact and produce an emergent effect greater than the individual elements, which must persist and adapt to changing circumstances" (Luke and Stamatakis 2012, 357). In decentralized public education systems in the United States, school leaders are responsive to a variety of associated stakeholders who are responsible for implementing and sustaining implementation over an extended period of time. Early, systematic, and ongoing engagement with diverse stakeholders is essential for strengthening the design of and fostering broad support for ambitious educational policies (Bae & Stosich 2018). The involvement of diverse stakeholders (e.g., teachers, administrators, legislators, union leaders, community advocates) in the development of curriculum initiatives encourages agreement and fosters support among individuals and groups with divergent views.

Approaches to Measuring Media Literacy

Researchers have measured media literacy in one of two ways: by asking students to self-report their knowledge, attitudes, and skills or by asking them to perform tasks where the application of ML competencies are required. Performance tasks are very useful in measuring

media literacy competencies because they can measure how subjects apply analysis skills situationally and contextually in the actual use of media texts, but these can be time-consuming and expensive to code (Hobbs in press; Schilder et al. 2016).

Self-report measures can be useful, too, but some subjects may not be able to self-assess their media literacy competencies and others may choose a more socially acceptable answer rather than one that reflects their lived experience. Primack et al. (2006) used British and American theories of media literacy to create an 18-item survey that asks people to consider concepts including author and audience, message and meaning, and representation and reality in recognizing how media messages are carefully constructed.

A large volume of research has shown that exposure to ML learning activities leads to the acquisition of media literacy competencies (Jeong, Hyunyi, and Hwang 2012). Program evaluations of media literacy have used both self-report and performance measures in a range of different learning contexts. For example, elementary school students who learn to critically analyze advertising can improve persuasion knowledge with only a few hours classroom instruction (Nelson 2016; Stanley and Lawson 2020). Upper elementary school students who discussed the amount and location of advertisements directed at children and how to identify gender stereotypes and violence in ads increased their understanding of advertising bias (Sekarasih et al. 2018). High school students participating in a news video production course were more likely to participate in civic engagement when they had positive attitudes about news, current events, reporting and journalism (Hobbs et al. 2013). Students' knowledge about the institutions that produce news and the ways news is produced is associated with a deeper understanding about current events (Maksl et al. 2015).

It is noteworthy that research that documents the lack of learners' media literacy competencies has been an effective policy lever in public education. Interest in media literacy gained salience among parents and school leaders after Stanford University researchers showed that 80% of middle school students didn't recognize an ad that was masquerading as a news story, despite it being labeled as sponsored content (Breakstone et al. 2018).

The implementation of media literacy education in schools has been measured through student self-report, where students directly characterize their level of exposure to certain educational experiences. Kahne and Bowyer (2019) asked students how often they had classes in school in which they "learned about how to create and share digital media" and "discussed how to effectively share your perspective on social or political issues online (for example, by blogging or tweeting)." In a study of porn media literacy, Vandenbosch and van Oosten (2017) asked Dutch students to indicate whether their classes on sexuality and relationships had included discussions of the use of sexually explicit images and movies. Such measures are useful to researchers seeking to understand the contribution of media literacy education to other behaviors or variables of interest, but they are not granular enough to be useful for school-based implementation or curricular decision-making by classroom teachers, education leaders, and community stakeholders.

Thus, there is a need for a different approach to measuring the implementation of media literacy pedagogies, one that can guide school leaders and practitioners and serve as a baseline and benchmark for ongoing implementation processes. Because of the range of terms and concepts that are in circulation (news literacy, information literacy, visual literacy, digital literacy, etc.), many local stakeholders may lack a coherent understanding of what ML education consists of in practice (Bulger and Davidson, 2018). By measuring the perceptions of educators,

school leaders, community members and parents in each of the 24 school districts in the state, we can better understand how school districts implement ML instruction in elementary and secondary education.

Our research questions are as follows:

RQ1: How likely is it that students encounter ML learning activities in the 24 school districts in Rhode Island?

RQ 2: Which obstacles and facilitating conditions are associated with ML implementation in Rhode Island school districts?

Research Methods

We used a mixed-method research design and quota sampling to survey K-12 educators, librarians, school leaders, parents, community members and elected public officials in each of the 24 school district communities in the state. Semi-structured interviews were also conducted with 30 participants after they completed the survey. We offered a sweepstakes incentive to participants in return for taking the survey, and we used anonymization techniques to maintain data privacy and security. The research was approved by the university's Institutional Research Board.

Sample

A total of 526 participants completed the survey. We sought out stakeholders whose knowledge, beliefs, and opinions about ML education are most relevant for producing systemic change in K-12 schools. We identified six stakeholder groups, including current teaching staff, school leaders, librarians, parents of children enrolled in grades K - 12 local schools, community residents, and elected public officials. The sample included survey data from individuals who represented one or more key stakeholder groups, including 56% K-12 educators, 33% librarians,

7% school leaders, 25% parents, 32% community members, and 5% elected public officials. Results do not sum to 100% because participants could select more than one role. To ensure equitable geographical representation from the 24 school districts across the state, we identified the population parameters for each of the four quadrants of the state, collecting email and cell phone lists from publicly available data and through professional education networks in the state. We encouraged participants to share the survey with individuals in their own network, thus deploying snowball sampling as a secondary sampling strategy.

Variables of Interest

Student exposure to media literacy learning activities were composed as survey items that asked participants to estimate how likely it was that learners in the local community had encountered 16 learning activities in the past 12 months using a 5-point Likert scale that included "nearly all," "most," "some," "few" and "hardly any." The Media Literacy Implementation (MLI) Index consists of 16 learning activities that are described in a headline with a single explanatory sentence; these are presented in a sequence of three levels, with 4 items for elementary, 4 items for middle-school, and 8 items for high school. The instrument is shown in Appendix A. To develop the MLI Index, we reviewed the scholarly and professional literature to identify state-of-the-art "best practices" for media literacy pedagogy in K-12 education, and after generating items, we used cognitive pretesting with a sample of 6 educators to assess item comprehensibility. We reduced the number of items and made other changes to items based on their responses. Statistical tests of reliability and validity were conducted along with an education standards crosswalk that aligns the MLI Index to curriculum standards developed by professional education associations (Hobbs et al. 2022).

Obstacles and challenges were measured by asking respondents to review a list of 17 obstacles and limitations and indicate which challenges were most relevant to their schools and communities. We validated this data using principal components analysis to identify a six-factor structure (Hobbs et al. 2022). *Technology obstacles* included three items, including wireless connectivity in the school, access to digital devices, and wireless connectivity in the home. *Perceptions of students* included four items about student readiness, including beliefs that students lack basic skills and knowledge, lack interest, are not emotionally ready, or are too young or not mature enough to benefit from media literacy learning activities. *Academic priorities* included two items that measure the perception that a focus on test scores in reading and math or other priorities were more urgent than implementing media literacy learning activities. *Community response* included three items that measured concerns about controversy in community response, resistance from the community or lack of interest in the community. *Educator response* included four items that included limits in educator knowledge, experience, or know-how, no perceived need to change the curriculum, the perception that educators and teaching staff are reluctant or were not sure where it fits in the curriculum. *Policies* included two items addressing school policies regarding film and video and school policies regarding digital devices like mobile phones. The instrument is shown in Appendix B.

Approach to Data Analysis

After inspecting the quantitative data, we used descriptive statistics and t-tests, followed by analysis of variance to determine the relationship between ML implementation and size, geographic, and socioeconomic characteristics of school districts. Multiple regression was used to test if any of the obstacle variables predicted ML implementation. In analyzing differences between towns and cities, we used Bayesian statistics, which does not require a normal

distribution of the hypothetical population from which the samples originated. Like stepwise regression, this approach uses prior distributions for model parameters to yield a model that is an "average" of all the iterations, assuming a uniform prior probability. Bayesian analysis presumes that, while a set of parameters may have a "true" value, the uncertainty about the parameters can be quantified in the form of a probability distribution (Pardo 2020).

To analyze qualitative data, we collected responses to open-ended questions on the survey which asked people to explain their responses and transcribed interview data. We report data using pseudonyms for participant names and school district locations. We then used qualitative software to classify, sort and arrange information and examine relationships in these data sources. We first examined the frequency of key words and then identified useful concepts and key phrases. After open coding, we pulled concepts together by thinking through how each concept can be related to a larger more inclusive concept, using the constant comparative method (Strauss and Corbin 1998) where data from new transcripts were compared against prior interviews to add nuance to understand the obstacles and facilitating conditions of media literacy education. After transcribing the interviews, we read the transcripts verbatim, coded the transcripts separately, discussed codes in the research meeting, developed a coding scheme, and tested the codes continuously until data saturation (Glaser and Strauss 2006).

Finally, we also produced a report of findings designed specifically for the multiple stakeholders themselves, using the format of a community report card, where data on the state's implementation levels is presented in a highly visual way that enables readers to compare one community with another (Media Education Lab 2021). In this way, the results of the study would be most likely to reach the target audience of community stakeholders themselves.

Results

Implementation of ML Instructional Practices

To address our research question about the local prevalence of ML instructional activities across the state, we inspected the means and standard deviations of the MLI Index. Table 1 shows that two of the 16 items are being widely implemented at the high school level across Rhode Island. In two-thirds of Rhode Island high schools, students are highly likely to compose a research project that includes multimedia elements and nearly 50% get the opportunity to present a strong point of view by writing an article or creating a media presentation that advocates for or against a specific action, using reasoning and evidence to defend their point of view.

We found statistically significant differences in ML implementation when comparing the elementary, middle school and high school levels. Results show that while some ML learning activities are commonly implemented, others are encountered by fewer than one in five learners in local communities. For ease of communicating results to the public, we calculated the percentage of respondents who indicated that "nearly all" or "most" of the learners in their community had been exposed to a particular learning activity. As Table 1 shows, at the elementary school level, only 27% of respondents said that nearly all or most of the students in their community encountered activities where students compare two different forms of media to identify similarities and differences in content, format, target audience, and point of view (M = 2.83). Only 17% analyzed advertising to understand how images are manipulated and how persuasive techniques are used to influence behaviors and attitudes (M = 2.54).

At the middle school level, nearly one third (31%) of respondents said that nearly all or most of the students in their community encountered activities that helped them to determine the difference between a news story and an opinion story in print and broadcast journalism (M =

3.06). But fewer than one in five (16%) of students got a chance to consider the balance between online and offline life by keeping track of their media use over a period of time and discussing how media may be beneficial or harmful to their health, identity, and relationships (M = 2.56).

At the high school level, 68% of respondents said that nearly all or most of the students in their community completed a research project (M = 3.89), learning how to generate questions and gathering information from multiple sources to learn something new and then summarizing what they learned. Nearly one in four students got a chance to explore music from different time periods to identify how it reflects social values and activates strong emotions in ways that build consensus on controversial political issues (M = 2.84). But only 16% of students learned about the business of media, understanding how advertising is targeted to increase its effectiveness and how selling audience attention is the way that media companies make money (M = 2.71).

Because this study involved stakeholder subjects who may have different levels of knowledge about the implementation of ML instructional practices in local schools, we conducted T-tests to test for differences between the stakeholder groups. No statistically significant differences between educators, librarians, school leaders, elected public officials, parents, and community members were found for any of the measures used in this study. This finding strengthens our belief in the empirical value of engaging community stakeholders as the eyes and ears for this research study.

<center>--Place Table 1 about here--</center>

Community Level Implementation

We next examined levels of ML implementation across public school districts to identify school districts where media literacy instruction was perceived more likely to occur. Because each participant provides data on only one local community, it is important to note that

differential participation of survey participants in each community affects our ability to analyze and report community-level differences in implementation. Our ability to make meaningful statistical comparisons between towns and cities is limited due to the size of the cities or towns themselves, because some communities simply had far more survey respondents than others. For example, in City D, there were 57 respondents, while City A had a sample of 36 individuals and Town I had 29 participants. If a community had fewer than 10 survey participants, we did not feel confident to make any generalizations about ML implementation and we removed this data from subsequent analysis. To compare communities, we report findings from participants who lived or worked in the 14 towns and cities which had 10 or more participants, as shown in Table 2.

To visualize differences in media literacy implementation across communities, we created an index to equalize scores across the grade bands of elementary, middle school, and high school. We summed scores of 4 test items (on a 5-point Likert scale) for elementary and middle schools to create a measure of the mean implementation that ranged from 4 to 20. For high school levels, we summed 8 items and divided by 2 to create a comparative index. The total ML implementation score sums the 3 grade levels for a score that ranges from 12 to 60.

Some communities report substantial levels of ML implementation, as for example participants from Town F (total MLI = 37.31) and Town H (total MLI = 36.96), where participants indicated that most or nearly of students encountered media literacy learning activities. Lower levels of implementation were reported by participants from City A (total MLI = 28.99) and Town D (total MLI = 26.25), indicating that far fewer students encountered ML learning activities there.

Media literacy is implemented differentially at the elementary, middle-school, and high school levels. In some communities, media literacy learning activities were less likely to be found in the elementary grades. For example, elementary ML implementation scores were lowest in suburban Town D (elementary MLI = 8.4), and Town C (elementary MLI = 8.9) and much higher in the suburban Town F (elementary MLI = 12.5). At the middle-school level, media literacy implementation scores were lowest in the urban ring city of City C (middle school MLI = 9.14) and highest in suburban Town F (middle MLI = 12.28). At the high school level, media literacy implementation scores were lowest in the suburban Town A (high school MLI = 8.55) and highest in the urban ring town of Town H (high school MLI = 13.83). These findings are clear evidence of differential levels of implementation of media literacy across grade levels and communities in Rhode Island.

—Place Table 2 about here—

Could differences in ML implementation be explained by the demographic features of these communities? We used analysis of variance to examine how ML implementation scores varied across the 14 communities in relation to some demographic characteristics of the cities and towns. We examined whether differences in implementation level were associated with town size (small, medium, large), type of location (urban, urban ring, suburban, rural), and poverty level. To measure the level of poverty in a community, we created a score using data from the state education department regarding the percentage of students receiving free or reduced lunch. The measure included 4 levels (over 70%, 31 – 69% 11 – 30%, 10% or less). As Table 3 shows, there were no statistically significant differences between ML implementation scores based on town size, location, or level of poverty. Thus, differences in community ML implementation cannot be explained by demographic or socioeconomic differences between school districts. We

used Bayesian analysis because of its flexibility in specifying models that are appropriate for the data. Differences, ratios, and effect sizes are directly computed from the posterior distribution, producing a computationally robust estimate of parameter values and their credible intervals. Bayesian analysis does not depend on large-N approximations, as confidence intervals often do, and it provides methods for quantifying support in favor of the null hypothesis, and not only against the null hypothesis (Pardo, 2020).

Because implementation varies widely between communities but is not associated with demographic characteristics of the communities, we conclude that specific curricular actions and decisions made by school leaders, teachers, and librarians explain most of the differences in the implementation of media literacy in school districts. We next address the second research question to explore obstacles and facilitating conditions as they may impact ML implementation in school districts across the state.

—Place Table 3 about here—

Obstacles and Facilitating Conditions

Teachers and librarians work in complex institutions where a variety of contextual factors influence their behavior and actions with learners in the classroom. Survey data shows that participants identified technology (M = .30) as the most significant obstacle, including lack of wireless connectivity in the school, lack of access to digital devices, and lack of wireless connectivity in the home. Academic priorities (M = .25) were also seen as a limiting factor, with the school's focus on test scores in reading and math or other priorities perceived as more urgent than the need for media literacy education. Educator response (M = .20) was identified by participants who acknowledged limitations in educator knowledge, experience, or know-how, or the perception that there was no need to change the curriculum, or the perception that educators

and teaching staff are reluctant, or the perception that educators were not sure where it fits in the curriculum. Less important factors included school policies (M = .20), including school policies regarding film and video and school policies regarding digital devices like mobile phones and perceptions of student readiness (M = .20), including beliefs that students lack basic skills and knowledge, lack interest, are not emotionally ready, or are too young or not mature enough to benefit from media literacy learning activities.

Although we anticipated that community response would be an obstacle, it was the least likely factor to be perceived as an obstacle (M = .17) and survey participants did not generally feel that concerns about controversy in community response, resistance from the community or lack of interest in the community were interfering with the implementation of media literacy. We then wondered whether these six obstacles significantly predicted local levels of media literacy implementation, so we reviewed means and intercorrelations and then performed a regression analysis to determine how obstacles may predict ML implementation.

Results clearly show that fewer obstacles is associated with higher levels of implementation. Nearly half of the variance in ML implementation scores can be explained by obstacle variables. The results of the regression analysis is shown in Table 4, where obstacle variables explained 45.8% of the variance in ML implementation (R^2=.458, F(6,524)=5.56, p<.003). Fewer technology limitations significantly predicted higher levels of media literacy implementation (β = .308, p<.001), as did school policies (β = .219, p<.001), educator response (β = .126, p<.001), and academic priorities (β = .115, p<.001). Perceptions of students also predicted media literacy implementation (β = .989, p<.037). As Table 4 shows, only community response was nonsignificant (β = .062, p<.112).

—Place Table 4 about here—

The data shows that disparities in implementation of ML instructional activities in the 24 Rhode Island school district communities occur due to differential levels of technology, academic priorities, educator response, school policies, and perceptions of students. These factors combine to form significant challenges for those school leaders, teachers, and librarians wishing to implement media literacy instructional practices in Rhode Island schools.

Interview data suggests that there may be some facilitating factors that also contribute to ML implementation, including professional development opportunities, the integration of media literacy education across the curriculum, teacher-to-teacher collaboration, and school administration support. Training was mentioned frequently by interview participants, who described four different forms of professional development opportunities provided for educators, including those offered by local school districts, external organizations, grant-funded projects, and educators' independent learning. Several school districts offer professional development (PD) opportunities where librarians lead training sessions to improve the digital literacy skills of teachers in their own school district. The state has formal PD days where professional development training sessions on media literacy are among the topics offered. Library media specialists and educators are commonly the facilitators running these sessions. According to Deborah, a middle school library media specialist, the only PD type of training for media literacy that her district offers is through her own instruction. However, in the eyes of some participants, the PD sessions provided by the local school districts are too basic since these sessions only aim for technical training and ignore the importance of improving teachers' critical thinking. An urban district provides some training sessions for teachers to teach them how to use platforms, but Sonya explains, "It's very low level, in my opinion, because what's offered are, how to use platforms. Yeah, the PD sessions are offered, but it's like a 'how to something'."

In addition to the PD sessions provided at the district level, many educators seek opportunities to develop their professional skills through self-directed learning by attending relevant webinars offered by outside organizations, such as the Media Education Lab, the International Society of Technology in Education (ISTE), and Rhode Island Library Information Network. Laura attends the training sessions the state library offers, and Wanda attends professional development webinars and online training through ISTE. In addition, grant-funded projects are also available to help teachers. Sonya told us that she went to face to face workshops through a statewide grant funded program which aimed to improve teachers' critical thinking, and considered it to be eye-opening. Teachers also make efforts to improve their professional skills through independent learning by reading books and keeping up with professional literature and resources to improve their instructional practices.

The ease of integrating ML instructional practices into existing curriculum was mentioned by educators as a facilitating factor. Although some interview subjects described examples of media literacy as a stand-alone course, most noted efforts to integrate media literacy into the curriculum. According to both community members and educators, media literacy can be easily integrated into many different disciplines' curricula, such as English Language Arts, social studies and library classes. Kathy, a community member, thought teachers who teach language arts and social studies may involve some classes related to media literacy since for her "it would be hard not to cover it in classes like that." Erik, a middle school teacher, explains that digital and media literacy is incorporated into the curriculum in his district as a standalone elective, as well as being integrated into subjects like the language arts and library instruction. Pam collaborated with her colleagues who taught various subjects to intertwine media literacy lessons into the mandated curriculum that was already being taught. Similarly, Tracey, explains that

though she doesn't teach media literacy as a stand-alone course, she includes the elements of media literacy throughout different courses and in her school, media literacy is interspersed with other subjects, such as social studies and English classes. In conclusion, the integration of media literacy elements into various disciplines can contribute to the implementation of media literacy education.

Collaboration both inside and outside school is another facilitating factor that contributes to the implementation of media literacy education. As Lenore, a public librarian states, a more collaborative and communicative relationship between teachers and librarians is necessary for furthering media literacy skills and principles. On the one hand, educators collaborate with each other in teaching inside the classroom. For example, Terrence collaborates with other teachers in the school to create pieces of media. Similarly, collaborating with another two teachers, (an English teacher and a world language Spanish teacher), Wanda created a project for students where the students were required to pick a bilingual picture book that included Spanish and English words and practiced reading it as well as creating a promotion, like making canvas posters that were hung up all over the school for their book that was presented to the other students in the elementary school. Tracey also collaborates with her colleagues in teaching different pieces of units of study. For example, they integrate media literacy in civil rights or on the current issues with voting rights. And when they teach the same course, they will share some resources with each other, like links to different things and documents that would prompt the kids to do some collaborative group work.

Educator collaboration can extend beyond the school to the district level. Laura not only worked with teachers who teach other subjects, such as social studies, English, and science, when they sign up to take a class in the library, but she also gets together with 13 other library

media specialists in her district for curriculum meetings and she collaborates with them to develop curriculum and lesson plans. However, a lack of collaboration between faculty members also causes incoordination and isolation. Carmen, a librarian, points out that there is little to no collaboration between librarians and technology specialists on issues of technology use, and technology specialists do not allow enough time for educators and students to acquaint themselves with the new technology and thinks that a working relationship between the two sides would be considerably more beneficial. Sonya also shares the same opinion, saying that "the technology department should team up with the library media specialist since library media specialists are the ones who work with students and not just behind the scenes and the computers." To have a better implementation of media literacy education, collaboration should be encouraged not only inside the school but also across multiple districts in the state.

Discussion

This research measured the implementation of 16 ML instructional practices through surveys and interviews with community stakeholders in 24 school districts across the state. We found significant disparities between school districts in the integration of media literacy education at all grade levels and across cities and towns. Only a few instructional practices were common practice at the high school level. Surprisingly, differences in ML implementation across diverse communities could not be explained by geographic location, size, or level of poverty. Nearly half the variance in implementation scores were explained by obstacles including technology, academic priorities, educator response, school policies, and perceptions of students. This study empirically demonstrates how perceived obstacles affect the actual implementation of ML instructional practices in schools. As a result, in some communities in Rhode Island, students must navigate the world of modern media and technology on their own, without

exposure to instructional practices that may help them develop the critical thinking, communication skills, collaboration and creativity they need to thrive in a society saturated with digital media and technology.

Community-level differences in ML implementation may be the result of the presence of facilitating conditions, including the provision of professional development opportunities, the integration of media literacy education across the curriculum, teacher-to-teacher collaboration, and school administration support. In communities where media literacy is systematically implemented, there may be one or more champions who serve as a change agent: a superintendent, principal, library media specialist, or classroom educator. It could even be a community member or elected public official. Although we did not use a quantitative measure of facilitating conditions or identify school district champions directly, some of the stakeholders who completed our survey may have been such champions. Future research should aim to quantify the facilitating conditions that will enable researchers to gain a more granular understanding of how they influence ML implementation across grade levels and communities. Media literacy school champions have gained an awareness of the importance of media literacy, and they put that awareness into practice in their schools and community through concrete actions that include instructional practices in media literacy education (Schwarz, 2005).

There are some limitations to this research, as it was a small-scale project conducted during the coronavirus pandemic. COVID effects on education and challenges during the 2020-21 school year were many, from educator discomfort with online learning to adequate digital access or bandwidth in homes for students. Educational priorities shifted as well. The pandemic led to increased screen time for both students and teachers – and the challenge of online learning, with its sharp learning curve, affected both students and teachers (Friesem, et al 2022).

Despite our best efforts, we were also limited in our efforts to recruit an equivalent number of survey participants in all school districts, and we were unable to ensure that our sample represented an appropriate proportion of the overall population of residents in each community. This study used nonprobability quota sampling to ensure that participants from all 24 cities and towns (large and small) in the state were represented. But because not all Rhode Island residents had an equal chance of being selected to participate in this study, the sample cannot be said to accurately represent the entire population of state residents. In some communities, there were larger-than-expected sample sizes which indicated that a school leader (principal or superintendent) may have actively recruited participants. In other communities, we struggled to get more than a handful of participants despite repeated email queries. Because we were dependent on professional, educator, and parent networks (as well as media coverage) for spreading information about the research, our sample may (or may not) be representative of the population. For this reason, we recommend that future research be conducted using the MLI Index with a probability sample in all the states where media literacy legislation has been mandated in order to gain the most accurate understanding of how state laws may affect ML implementation.

In future research, the MLI Index could be lightly adapted for use with students in Grades 4- 12. Students may remember their own exposure to ML instructional practices during the academic year, and this population could be useful to study levels of schoolwide ML implementation in elementary, middle schools, and high schools. Comparing student response to educator and community response could be a powerful form of triangulation in getting a clear, accurate picture of the levels of ML implementation in a particular school or community. Such

measures should be used to determine the nature of the relationship between exposure to instruction and the development of learners' media literacy competencies.

Future research could help to discover whether and how a multistakeholder survey assessing the prevalence of ML instructional practices can function as a tool for advocacy to increase stakeholder knowledge of the breadth of media literacy topics and its applicability across the curriculum. As media literacy education gains visibility around the world, the growing number of different terms used to define it may be confusing to education stakeholders (Suwana 2021). But by reading about 16 concrete descriptions of classroom learning activities that visualize what media literacy could look like in elementary and secondary schools, it may be possible that stakeholders can gain new knowledge about media literacy education pedagogies. We do not know whether or how exposure to our survey led participants to broaden their conceptualization of media literacy education beyond how it is usually understood in relation to so-called fake news. Future research should explore the potential for a community survey to increase people's knowledge and understanding of the instructional practices of media literacy education.

Appendix A

Media Literacy Implementation Index (MLI)

Elementary School ML Instructional Practices	
Item	Item Description
Compare and Contrast	Students compare and contrast two different forms of media to identify similarities and differences in content, format, target audience, and point of view.
Advertising	Students interpret different types of advertising to examine how images can be manipulated and then they reflect on how advertising affects attitudes and behaviors.
Tell a Story	Students adapt a book into a media genre, including animation, video game, or video, creating a storyboard or a script to depict an imaginary world with characters, conflict, and a sequence of events.
How Media Messages Influence	Students identify the many different choices that creators make and consider how the design of media messages may influence people's thoughts, feelings, and beliefs.
Middle School ML Instructional Practices	
Examine the News	Students determine the difference between a news story and an opinion story in print and broadcast journalism.
Balancing Online and Offline Life	Students keep track of their media use over a period of time and discuss how media may be beneficial or harmful to their health, identity and relationships.
Team-Based Production	A small group of students work collaboratively to create a video and their work is viewed by parents, peers or the community.
Stereotypes	Students analyze examples of different types of media to spot stereotypes and examine how values and ideologies are embedded in characters and stories.
High School ML Instructional Practices	
Research Project	Students learn how to generate questions and gather information from multiple sources to learn something new and then summarize what they learned by creating a written work, video, oral presentation, podcast, infographic or other media project.

Reflect on your Own Interpretations	Students examine various information sources and notice how their own opinions and existing beliefs may influence their interpretation of what they see and read.
Music and Cultural Values	Students explore music from different time periods to identify how it reflects social values and activates strong emotions in ways that build consensus on controversial political issues.
The Social Responsibilities of Communication	Students reflect on how they use both online and face-to-face expression and communication in their social relationships and learn how to reduce conflict and disrupt hurtful or aggressive talk and actions through dialogue and active listening.
Create a Public Service Announcement	Students choose a topic and work collaboratively to create a public service campaign designed to raise awareness, promote a cause or an event, or motivate people to take action in the community.
Present a Strong Point of View	Students write an article or create a media presentation that advocates for or against a specific action, using reasoning and evidence to defend their point of view.
The Business of Media	Students learn about how advertising is targeted to increase its effectiveness and how selling audience attention is the way that media companies make money.
Media Law and Policy	Students learn about the First Amendment and other laws that empower them as citizens in a democracy and apply social responsibility as both creators and consumers of media messages.

Appendix B

Obstacles and Limitations to MLE Implementation

Factor	Description
Technology	Wireless connectivity in the school Access to digital devices Wireless connectivity in the home
Perceptions of Students	Students lack basic skills and knowledge Students lack interest Students not emotionally ready Students are too young or not mature enough
Academic Priorities	Focus on test scores in reading and math Other priorities more urgent
Community Response	Concerns about controversy in community response Resistance from the community Lack of interest in the community
Educators	Limits in educator knowledge, experience, or know-how No perceived need to change the curriculum Educators and teaching staff are reluctant Not sure where it fits into the curriculum
Policies	School policies regarding film and video School policies regarding digital devices like mobile phones

Notes on Contributors

Renee Hobbs is a professor of communication studies at the University of Rhode Island's Harrington School of Communication and Media. As the Founding Director of the Media Education Lab, her research explores digital and media literacy policy, implementation, and assessment, propaganda education, and online professional development. More can be found here: https://mediaeducationlab.com and Twitter at @reneehobbs.

Mary Moen is an assistant professor at the Graduate School of Library and Information Studies in the Harrington School of Communication and Media at the University of Rhode Island. As the Coordinator of the School Library Media educator preparation program, her research interests include professional development in digital and media literacy competencies for librarians and educators.

Rongwei Tang is a doctoral student at the University of Minnesota's Hubbard School of Journalism & Mass Communication. Her research interests include media literacy and misinformation.

Pam Steager is a Senior Trainer, Researcher and Writer at the Media Education Lab and Coordinator of Media Literacy Now Rhode Island. She co-authored *The Library Screen Scene*, a book on film and media programs in school and public libraries, published by Oxford University Press in 2019 as well as the Media Education Lab's *Media Education for Law Enforcement* curriculum.

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Table 1
Media Literacy Implementation (MLI): Instructional Practices

	MLI %	M	SD	t	df	sig
Elementary School						
Compare and Contrast	27	2.83	1.17	46.412	368	.0001***
Images and Advertising	17	2.54	1.08	45.142	368	.0001***
Tell a Story	29	2.83	1.18	46.098	367	.0001***
How Media Messages Influence	21	2.59	1.14	43.85	368	.0001***
Middle School						.0001***
Examine the News	31	3.06	1.01	56.402	346	.0001***
Balance Online and Offline Life	16	2.56	1.03	46.247	346	.0001***
Team-Based Production	26	2.94	1.02	53.513	345	.0001***
Stereotypes	26	2.87	1.02	52.734	346	.0001***
High School						.0001***
Research Project	68	3.89	0.98	73.139	339	.0001***
Reflect on Your Own Interpretations	37	3.13	1.00	57.423	338	.0001***
Music and Cultural Values	23	2.84	0.98	53.254	338	.0001***
Social Responsibilities of Consumers & Creators	32	3.06	1.00	56.254	338	.0001***
Create a PSA	16	2.66	0.98	49.472	330	.0001***
Present a Strong Point of View	47	3.4	1.02	60.74	332	.0001***
The Business of Media	16	2.71	0.89	55.353	332	.0001***
Media Law and Policy	22	2.8	0.99	51.524	332	.0001***

Note: MLI % is the percentage of respondents who report that "nearly all" or "most" of the students in their community encountered the activity

*p < .05. **p < .01. ***p < .001

Table 2
Media Literacy Implementation (MLI) Scores by School District

n	District	Elementary	Middle	High	Total
10	TOWN A	11	10.5	8.55	30.05
11	TOWN B	9.45	10.6	10.725	30.775
11	TOWN C	8.9	9.72	10.135	28.755
36	CITY A	8.66	9.72	10.61	28.99
14	CITY B	11.07	12.07	9.96	33.1
10	TOWN D	8.4	9	8.85	26.25
10	TOWN E	11	10.3	12.3	33.6
14	TOWN F	12.5	12.28	12.535	37.315
14	CITY C	10.71	9.14	9.14	28.99
57	CITY D	10.82	9.85	10.12	30.79
12	TOWN G	11.1	10.4	10.9	32.4
15	CITY E	11.4	10.2	11.35	32.95
12	TOWN H	11.83	11.3	13.83	36.96
29	TOWN I	10.27	10.41	9.465	30.145
	Mean	**10.51**	**10.39**	**10.61**	**31.51**

Elementary, Middle and High School scores range from 4 – 20. Total score ranges from 12 – 60.

Table 3
Analysis of Variance of MLI by School District Characteristic

Characteristic	Posterior Mean	Variance	F	Sig	Bayes Factor
Size					
Small	31.88	4.43	0.298	0.748	0.8
Medium	31.95	1.9			
Large	30.43	3.3			
Type					
Rural	31.58	7.61	0.119	0.947	0.26
Suburban	31.01	2.53			
Urban Ring	32.19	3.04			
Urban	30.7	15.22			
Poverty Level					
Over 70%	29.89	6.9	0.473	0.708	0.044
31 - 69%	32.62	2.3			
11- 30%	31.09	2.7			
10% or less	30.05	13.8			

*p < .05. **p < .01. ***p < .001

Table 4
Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	B	Std. Error	Beta	t	Sig	Lower Bound	Upper Bound
(Constant)	5.964	0.897		6.651	.0001***	4.202	7.725
Technology	18.475	2.647	0.308	6.98	.0001***	13.275	23.675
Students	6.801	3.25	0.089	2.093	.037***	0.416	13.186
Academic	6.315	2.084	0.115	3.03	.003***	2.221	10.408
Community	4.592	2.887	0.062	1.59	.112	-1.081	10.264
Educators	8.829	2.866	0.126	3.08	.002***	3.198	14.46
Policies	13.671	2.399	0.219	5.698	.0001***	8.958	18.385

Note: Dependent Variable: Media Literacy Implementation
*p < .05. **p < .01. ***p < .001