Perceptions of Media Literacy Assessment: A Mixed Methods Study

Evelien A. M. Schilder

Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy in
Curriculum and Instruction
(Instructional Design and Technology)

Barbara Lockee (Chair)
John Burton
Katherine Cennamo
Ken Potter

March 27, 2014
Blacksburg, Virginia

Keywords: Media Literacy, Media Education, Assessment

Perceptions of Media Literacy Assessment: A Mixed Methods Study

Evelien A. M. Schilder

ABSTRACT

Media literacy scholars have to a great extent ignored the assessment of media literacy outcomes and associated challenges. Martens (2010) states that evaluating and explaining the effectiveness of media literacy education is one of the most overwhelming challenges for current research in the field. Buckingham and Domaille (2009) claim that the lack of structured assessment procedures likely contributed to the lack of status of media literacy education. The purpose of this mixed methods study (exploratory sequential design) was therefore to explore the views of media literacy scholars and professionals on media literacy assessment through qualitative interviews ($N = 10$) with the intent of using this information to develop a quantitative survey to validate and extend the qualitative findings with a larger sample of media literacy professionals and scholars from all around the world ($N = 171$).

The study provides an overview of goals and outcomes of media literacy education. In addition, it provides information about the extent to which outcomes are specified and by whom these outcomes are specified. The study also offers a comprehensive overview of assessment methods that were used by participants of the study, the role that media literacy plays in their work, and the entities which developed these assessment methods. It provides further detail about the extent to which the learning process and product are assessed, the importance of context in assessment, approaches that are used to evaluate and interpret students' work, and factors that influence the way participants assess media literacy. The study also offers an overview of assessment challenges that were encountered by participants and the extent to which these are considered challenges for the field. In addition, for each of the assessment methods that were used by participants, a distinct set of challenges is identified. An account of the extent that respondents felt constrained by any outside regulations or mandates is provided as well, along with a description of how they would assess media literacy void of these constraints. Finally, methods to overcome media literacy challenges are presented, along with recommendations to improve the effectiveness of media literacy assessment.
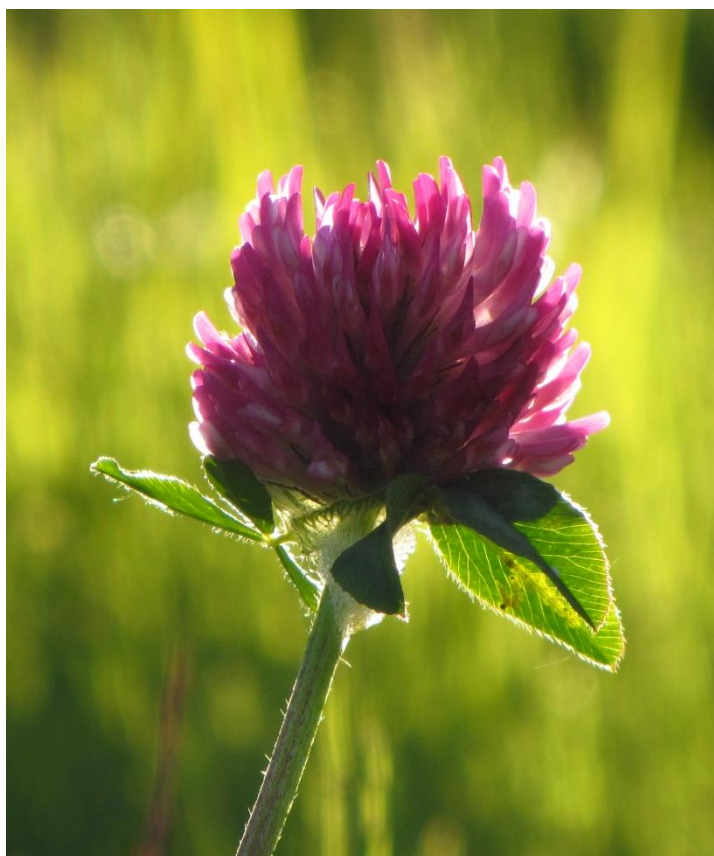
Dedication

This dissertation is dedicated to my parents,

Peter and Tonny Schilder,

who have always supported me

in the pursuit of my dreams.

Acknowledgements

Even though writing a dissertation is a very solitary process, it does not have to be a lonely one. I am grateful for the support of many who have made this process quite a wonderful experience.

First, I would like to thank my committee members Dr. Barbara Lockee, Dr. Ken Potter, Dr. John Burton, and Dr. Cennamo for all their support, help, and guidance. I also want to thank them for providing me with the liberty to write this dissertation about media literacy, a subject I am very passionate about, even after writing a dissertation about it. I would especially like to thank my committee chair, Dr. Lockee, for never losing faith and for providing me with encouragement and confidence whenever I had any doubts.

I am also very grateful for my expert reviewers who have spent many hours reviewing my interview and survey protocols. Thank you for your great advice and for making my dissertation what it is today. I would also like to thank every single one of my interviewees for letting me interview you and for providing me with your openness and great insights. I also owe many thanks to all my survey participants who have devoted a combined total of 7770 minutes of their time to participate in my survey. In addition, I would like to thank all individuals and media literacy organizations who have promoted and distributed my survey without asking anything in return. Overall, I have no words to describe how grateful I am for my expert reviewers, interviewees, and respondents, who all participated in my study with the sole purpose of helping me and the field of media literacy move forward. I wish I could all thank you by name, though unfortunately the IRB does not allow me to do so. Regardless, without you, I would not have been able to write this dissertation.

Piglet noticed that even though he had a Very Small Heart,

it could hold a rather large amount of Gratitude.

- A.A. Milne, Winnie-the-Pooh

Table of Contents

List of Tables

List of Figures

Chapter 1 - Introduction

The Research Problem

Media literacy education has gained a lot of attention the past decades. In the last 10 years, 50 doctoral dissertations have been written on the topic, two media literacy journals (*Journal of Media Literacy Education* and *The Media Education Research Journal*) have been established, and the keyword 'media literacy' currently generates over two million web pages (Hobbs, 2011). Furthermore, Hobbs (2011) argues that there is more engaged participation between scholars and practitioners on media literacy than was ever dreamed of just a decade ago.

Even though media literacy education seems to be thriving, media literacy assessment remains an issue of concern. According to Livingstone and Thumim (2003), there is not much consensus over the appropriate way to measure media literacy. This is reflected by the variety of ways media literacy is assessed. Livingstone and Thumim (2003) state that different research methodologies and samples make it difficult to draw comparisons. Scharrer (2002) argues that even though there is a generalized understanding about what media literacy outcomes are, they are often not explicitly defined and measured. Similarly, Bergsma and Carney (2008) believe that media literacy scholars and professionals should be more precise about the concepts and skills to include in their lessons. Media literacy should be more clearly defined and standards or criteria to assess media literacy should be developed (Christ, 2004; Zacchetti, 2011). Martens (2010) states that evaluating and explaining the effectiveness of media literacy education is one of the most overwhelming challenges for current research in the field.

A better descriptive account of outcomes of media literacy education was therefore needed, in addition to a more comprehensive account of how these outcomes are currently assessed in the field. It is often asserted that the development of media literacy assessment is

challenging (see: Livingstone & Thumim, 2003; Martens, 2010; Scharrer, 2002; Scheibe & Rogow, 2011). This study provided a detailed account on the nature of these challenges, and more importantly, suggestions on how these challenges could be overcome.

Purpose

This study addressed media literacy assessment. The purpose of this exploratory sequential design was to first explore the views of media literacy scholars and professionals on media literacy assessment with the intent of using this information to develop a quantitative survey to validate and extend the qualitative findings with a larger sample. The first phase of the study was a qualitative exploration of media literacy outcomes, assessment practices, existing challenges, and possible solutions to these challenges. In this phase, interview data was collected from a purposeful sample of 10 media literacy scholars and professionals. From this initial exploration, the qualitative findings were used to develop measures that were administered to a larger sample. In the quantitative phase, survey data were collected from a sample of media literacy professionals and scholars from all around the world ($N = 171$) to validate and extend the qualitative findings.

Since the aim of this study was to both *explore* media literacy assessment and to *validate* and *extend* findings with a larger sample, mixed method data collection methods were chosen. According to Creswell (2009), a mixed methods approach could provide a more expanded understanding of a research problem.

Research Questions

This study was guided by four research questions.

1. What outcomes do media literacy professionals and scholars identify as important?

2. How do media literacy professionals and scholars assess these outcomes?

3. Which challenges do media literacy professionals and scholars identify regarding media literacy assessment?

4. What recommendations do media literacy professionals and scholars make to overcome the challenges of assessment?

The Audiences That Will Profit From the Study

Since there seems to be a lack of consensus over the appropriate way to measure media literacy (Livingstone & Thumim, 2003), media literacy scholars, professionals, and instructors teaching media literacy may profit from this study as they will need to assess their learners appropriately. This dissertation may provide these scholars, professionals, and instructors with an overview of media literacy outcomes, assessment practices, assessment challenges, and possible solutions to these challenges. In addition, students in media literacy education may benefit from the study as well, as their media literacy knowledge and skills could hopefully be more appropriately assessed in the future.

Benefits to the Field of Instructional Design and Technology

Nitko and Brookhart (2011) define assessment as "a process for obtaining information that is used for making decisions about students; curricula, programs, and schools; and educational policy" (p. 3). From an instructional design perspective, learner assessment is a crucial element in the instructional design process (Dick, Carey, & Carey, 2009). Learner assessments are important to evaluate both the learners' progress and instructional quality. In instructional design practice, assessments are often even developed before the design of the instruction. Without proper ways to measure students' media literacy skills, it is impossible to determine whether media learning outcomes are met and whether media literacy instruction is effective. In addition, for assessment

to be effective, it is crucial that the intended outcomes match the given instruction and assessment practices (Dick, Carey, & Carey, 2009; Nitko & Brookhart, 2011).

However, every type of assessment comes with certain advantages and challenges. Certain types of assessment assessing higher order thinking skills (such as media literacy) are often difficult to develop (Leighton, 2011; Nitko & Brookhart, 2011). They may also take students a lot of time to complete and take instructors a considerable amount of time to score (Center for Advancement of Learning and Assessment [CALA], 1998; Nitko & Brookhart, 2011). Furthermore, such assessments may have a lower scorer reliability and be very context specific, resulting in a low content sampling reliability (Nitko & Brookhart, 2011). This dissertation provided a careful analysis of assessment practices, challenges, and recommendations for a particular field, media literacy. This may advance the field of Instructional Design and Technology as the information that will be provided in this dissertation may inform future assessment practices and the design of future assessments aiming to measure higher order thinking skills.

Definitions

   Media literacy. Media literacy is the "ability to access, analyze, evaluate, and communicate information in a variety of forms" (the National Association of Media Literacy Education [NAMLE], 2007, para. 1). "Media literacy builds an understanding of the role of media in society as well as essential skills of inquiry and self-expression necessary for citizens of a democracy." (Center for Media Literacy [CML], 2011, para. 2).

   Assessment. Nitko and Brookhart (2011) define educational assessment as "a process for obtaining information that is used for making decisions about students; curricula, programs, and

schools; and educational policy" (p. 3). The focus of this study is on assessing student achievement.

   Media literacy professionals and scholars. The media literacy professionals and scholars who are the subjects of this study have either developed one or multiple media literacy assessment instruments before, have taught media literacy (regardless of age-group or subject area), and/or have conducted research regarding media literacy education. No exclusions have been made based on their geographical location, race, gender, education, or religion.

Chapter 2 - Literature Review

A literature review was conducted to explore the status of media literacy education and related issues and challenges. This literature review consists of three main sections. In the first section, the theoretical foundations of media literacy education are discussed, in addition to media literacy teaching approaches, skills, and outcomes. The second section is about assessment (general principles of assessment, how to assess higher order thinking, and challenges regarding assessing higher order thinking skills). In the third section, assessment of media literacy is discussed (media literacy assessment approaches, assessment instruments, and challenges regarding media literacy assessment).

Media Literacy Education

Theoretical Foundations of Media Literacy Education[1]

Media literacy resides within numerous disciplines. In this section on the theoretical foundations of media literacy education, a broad range of major communication theories that have influenced media literacy education are described first. Subsequently, theoretical foundations mainly coming from education and learning theory are described. A shift in focus from one theoretical basis to another will be explained next, as well as a comparison of communication theory, learning theory, and their intersections. This is concluded by describing media literacy key concepts that are often said to form the theoretical foundation of media literacy education.

---

[1] This section on theoretical foundations of media literacy education is a shortened and adapted version of previously published work: Schilder, E. (2013). Theoretical underpinnings of media literacy from communication and learning theory. *Journal on Images and Culture, 2*. Retrieved from http://vjic.org/vjic2/?page_id=1321

Communication theory. In a book chapter entitled *The Theoretical Foundations of Media Education Programs,* Piette and Giroux (1998) specifically write about the theoretical underpinnings of media literacy from a communication theory perspective. These authors argue that most media literacy education programs do not present themselves as indebted to theory, but that they do heavily depend on media theory. Piette and Giroux (1998) describe seven major mass communication approaches that are at the basis of many media literacy programs. These approaches differ on the amount of influence that is attributed to the media (powerful or not powerful) and the nature of the audience (active or passive). Piette and Giroux (1998) describe four approaches originating in the United States and three European approaches.

The four approaches from the United States are the stimulus response model, uses and gratification approach, cultivation theory and agenda setting theory. In the stimulus response (S-R) model, a model that was especially popular towards the end of the 19th century and into the early 1930s, media are seen as powerful and the audience as passive and uncritical (De Boer & Brennecke, 2003). In contrast, in the uses and gratifications model, the media does not have much influence as public is seen as active and goal directed (Wartella & Reeves, 2003). Media are said to compete with other sources of gratification or satisfaction. According to the cultivation theory, it is assumed that repetitive lessons people learn from television and other media are likely to become the basis for their broader world view (Gerbner, Gross, Morgan, & Signorielli, 1994). Like educators, religion, and parents, media are seen as shapers of our symbolic environment. Media are therefore viewed to have powerful, but indirect effects. According to the agenda setting theory, media do not tell people what to think, but what to think about (McCombs & Shaw, 1972). People will learn from the media which issues are regarded as important, which also assumes a powerful, yet indirect influence of the media.

The European approaches mentioned by Piette and Giroux (1998) are the critical perspective, the "classical" semiotic approach and the cultural studies approach. The critical perspective assumes similar powerful effects as the S-R model. Unlike the S-R model, media are viewed from an ideological standpoint. Media, which are said to be controlled by the ruling class, are assumed to impose a repressive ideology into the consciousness of the homogenous mass (McQuail, 2000). In this sense, the audience is perceived as rather passive, while media are perceived to be powerful. Within the "classical" semiotic approach, the media are assumed to have a powerful influence, because they have become the carrier of myths that flourish in different cultures (Piette & Giroux, 1998). In the cultural studies approach, the media are assumed to have a powerful influence on a rather heterogeneous audience. One of the main premises is that getting meaning is problematic as meaning in any particular context is never fixed. Messages can be encoded (created) in one way, but be decoded (read or interpreted) by the audience in a different way (Hall, 1997). Audiences are therefore rather active.

In addition to these seven different mass communication theories mentioned by Piette and Giroux (1998), there is another mass communication approach that is often credited as having formed the theoretical underpinnings of media literacy education (see: Buckingham, 2003; Hobbs & Jensen, 2009; Moody, 1999). This is the approach of Marshall McLuhan. This scholar took a somewhat different approach to media effects research. Together with Quentin Fiore (1967) he wrote a book entitled *The Medium is the Massage*. In this book, McLuhan perceives media as powerful but in a different way than other researchers. McLuhan moved away from describing effects of the 'content' of media on the receiver to describing effects of the 'form' of media on the receiver. For example, he describes how Western society is shaped by the alphabet. With the arrival of the alphabet, people did not need to memorize whole books anymore. This

changed the way our memory works, creating forgetfulness in learners. He sees media as an extension of man.

According to Piette and Giroux (1998), each of the mass communication theories has formed the theoretical underpinnings of different media literacy curricula. In their research, certain theories were not more common than others. They therefore doubt whether media literacy education can actually be viewed as an autonomous field with a distinctive theoretical framework. They argue that media literacy education rather fits within the broader framework of theoretical advances in mass communication research. On the one hand, Piette and Giroux seem to believe that teachers and creators of media literacy programs base their media literacy lessons on their own belief systems and backgrounds, matching it with a related mass communication theory. On the other hand, others argue that media literacy scholars and practitioners are reaching consensus on which theoretical approach is the most appropriate. Several media literacy scholars have described how the prevalence and importance of specific theoretical approaches have declined and grown over time (e.g. Buckingham, 2003; Hobbs, 2005a; Masterman, 1985). For example, Hobbs (2005a) argues that the S-R model of media effects has been especially marginalized by British, Canadian, American, and Australian media literacy researchers in the 1990s as media literacy has since then been positioned within the cultural/critical studies paradigm. Even though some media literacy scholars agree that the S-R model is outdated (e.g. see Buckingham, 2003; Hobbs, 2005a; Masterman, 1985), the view that media are powerful and that children should be protected from their messages has never completely vanished.

Buckingham (2003) argues that media literacy education in the United States is to a certain extent still impacted by fears about the effects of sex and violence in the media and the role of the media in promoting consumerism or materialism. He also argues that this protectionist

stance seems to gain importance with the entrance of every new medium or piece of technology. He mentions that this is currently happening with the Internet. Dangers of pornography, pedophiles, and seductions of online marketing are topics that are often discussed in public debate (Buckingham, 2003). As a consequence, certain groups that promote media literacy still act upon this view that media are harmful and that children should be protected from their influence. However, even though media could have possible harmful effects, it is generally agreed that these effects are not as direct as was often assumed (De Boer & Brennecke, 2003). It may therefore be better to teach young people to cope with these media messages instead of condemning their use. This shift is better explained when describing learning theories which have also influenced media literacy education.

Learning theory. From the 1960s and 1970's, interpretive education scholars such as Lev Vygotsky (1962, 1978), Postman and Weingartner (1969), and Paolo Freire (1970, 2000) were starting to influence media literacy education. According to Hobbs and Jensen (2009), these scholars conceptualized literacy "as a socio-cultural practice that embodies, reflects, and refracts power relations" (p. 3). Freire (2000) for example opposes what he calls the 'banking system' of education, in which students are treated like empty vessels in which knowledge is simply deposited. The teacher deposits the knowledge and the students simply receive and store the knowledge as depositories. The student is seen as passive in this 'banking system' of education. Freire (1970, 2000) therefore calls for a critical pedagogy in which students are assumed to take a more active role. Students should co-construct and transform reality as they become critical thinkers and inquirers.

According to media literacy scholar David Buckingham (2003), the work from Lev Vygotsky has also influenced media literacy education as it offers a social theory of

consciousness and of learning (Vygotsky, 1962, 1978). According to Vygotsky, the development

of higher mental functions depends on socially and historically dependent signs that mediate

social and psychological processes. In this sense, learning is socially and historically defined.

Another aspect of Vygotsky's work that has been regarded as useful is a movement beyond the

dichotomy of progressive and traditional approaches (Buckingham, 2003). Learning, according

to Vygotsky, is not simply about discovery, nor about passive reception of ideas. This relates to a

concept described as the zone of proximal development. Vygotsky (1978) defines the zone of

proximal development as "the distance between the actual developmental level as determined by

independent problem solving and the level of potential development as determined through

problem solving under adult guidance or in collaboration with more capable peers" (p. 86).

When teaching media literacy, the teacher should therefore not just stand on the side, but work in

these 'zones' and guide or scaffold his or her students.

According to Hobbs and Jensen (2009), media literacy scholars were also influenced by

Postman and Weingartner (1969). In 1969, Postman and Weingartner wrote about the nature of

inquiry learning and how it changes the relationship of the instructor and the student. According

to these researchers:

> (1) the teacher rarely tells students a personal opinion about a particular social or political
>
> issue; (2) does not accept a single statement as an answer to a question (3) encourages
>
> student-student interaction as opposed to student-teacher interaction, and generally avoids
>
> acting as a mediator or judging the quality of ideas expressed; and (4) lessons develop
>
> from the responses of students and not from a previously determined "logical" structure.
>
> (Postman & Weingartner, 1969, as cited in Hobbs & Jensen, 2009, pp. 3-4)

From protection to democratization. Influenced by scholars such as Freire (1970, 2000), Postman and Weingartner (1969), and Vygotsky (1962, 1978), Buckingham (1998), and Hobbs and Jensen (2009) argue that the development of media literacy education is part of a wider move towards the democratization of education. The most prominent advocate and promoter of this more democratic approach is Len Masterman (Buckingham, 1998). In 1985, Len Masterman wrote an influential and, at that time, controversial book on media literacy education entitled *Teaching the Media*. Masterman, who has had a significant influence on media literacy education in Great Britain, Australia, and Europe, was one of the first media educators who wanted to break away from the 'protectionist' paradigm that had initially dominated media literacy education. In his view, the general system of education at that time was drastically different from the way media literacy should be taught. He argued that media literacy education would soon be extinguished if the introduction of the topic was not accompanied by major pedagogic transformations. Influenced by previously mentioned authors, Masterman (1985) suggested that the nature of media literacy education lends itself most to a constructivist approach to education. He argued that a few conditions are necessary for media literacy education to thrive, such as "non-hierarchical teaching modes and a methodology which will promote reflection and critical thinking whilst being as lively, democratic, group-focused and action-oriented as the teacher can make it" (p. 27).

In addition to Masterman, there are other scholars who have been calling for this new paradigm of teaching media literacy influenced by both education and communication theorists. Buckingham (2003) writes about the paradigm shift from using media literacy education for protection purposes to teaching media literacy for preparation purposes. He argues that this change is in line with a broader development related to school curricula. He states that there has

been a move in both media literacy education and education in general towards democratization, which Buckingham (2003) describes as "a process whereby students' out-of-school cultures are gradually recognized as valid and worthy of consideration in the school curriculum" (p. 9). Over time, it has become more and more accepted to write in school about every-day experiences and about popular culture. No longer are values of a 'high' culture imposed on students.

Communication theorists have over time also increasingly accepted the study of popular culture (Jensen & Rosengren, 1990). The notion that media carry a single set of ideologies and beliefs is no longer easy to sustain (Buckingham, 2003). The media landscape has come to be seen as more heterogeneous than a few decades ago and research has also shown that audiences are more active than previously assumed (Buckingham, 2003). In educational settings, media literacy education therefore does not assume the student to be a mere recipient of a fixed meaning of a media message. It rather adopts a more student-centered approach to teaching and learning (Buckingham, 2003; Masterman, 1985). Hobbs (2005a) argues that over time, British, Canadian, American, and Australian media literacy researchers have positioned media literacy education within the cultural/critical studies paradigm. She claims that, in this paradigm, constructivist theories of teaching and learning play a central role. Considine and Haley (1999) also mention pleasure as one of the principles of media literacy, noting the importance of acknowledging pleasure that students derive from both consuming and producing media.

Reaching consensus. In the middle of the 20th century, mass communication theorists appeared to move away from the simplistic S-R model of communication that assumed direct effects of mass media on a passive homogeneous audience (De Boer & Brennecke, 2003). McQuail (2000) argues that the transmission model stems from older institutional contexts and is only appropriate to media activities which are instructional, informational, or propagandist in

purpose. He states that even though not everything has changed, new technological possibilities for communication that are not massive or one-directional are becoming more and more common and he argues that there is a shift away from the earlier massification of society. Generally, the audience has come to be seen as more and more active and selective in their use and interpretation of media messages (Jensen & Rosengren, 1990) and the emergence of new communication technology have changed traditional assumptions of how people use media (Baran & Davis, 2012). Baran and Davis (2012) argue that notions about an active audience that uses media content to create meaningful experiences are at the center of current communication perspectives.

Similarly, an active 'audience' or rather, an active 'learner', is at the basis of constructivist learning theory. According to Ertmer and Newby (1993), learners are not only active processors of information in constructivism; they are also actively creating and constructing meaning. Constructivists do not necessarily deny the existence of a physical world (except radical constructivists), but they argue that it is not the physical world which conveys meaning. Rather, it is the language system or any other system that is used to represent this material world. According to Hall (1997) "it is social actors who use the conceptual systems of their culture and the linguistic and other representational systems to construct meaning, to make the world meaningful and to communicate about that world meaningfully to others" (p. 25). According to Jonassen (1991), our world is created by our minds, so no world is more real than another world. Both 'audiences' (from a communication perspective) and 'learners' (from a constructivist learning perspective) are therefore increasingly seen as active constructors of meaning.

Duffy and Jonassen (1992) argue that there have been two changes in society that caused scholars to return to constructivism. Those two changes are the volume of information in society and the new opportunities provided through technologies. Duffy and Jonassen (1992) state that the information age and technological capabilities have caused us to conceptualize the learning process again and to design new instructional approaches. Information is rapidly changing and more readily available. This makes mastering information in a content domain and storing information less important or even impossible, as there is too much information to store and since information rapidly changes over time (Duffy & Jonassen,1992). The field of media literacy particularly plays into this. The changes in information and technologies are often mentioned as the reason or purpose for media literacy education (Buckingham, 2003; Masterman, 1985). Because of these changes, Duffy and Jonassen (1992) argue that the goal of education should not be to master content, but rather to understand and use information to solve a real-world problem. This understanding and use of information also appears as one of the goals of media literacy education. Consequently, the marriage of media literacy, communication theory, and constructivist learning theory seems logical.

In short, it seems that the field has matured over the years and that consensus has been reached about the theoretical underpinnings of media literacy. For example, many scholars currently agree over the new democratic and constructivist paradigm which focuses on preparing students rather than protecting them. Over the years, media literacy scholars and organizations have itemized their conceptual understandings of the field (Hobbs, 2005a). These conceptual understandings are principally grounded in constructivist learning theory and communication theory. They are referred to as the key concepts or principles of media literacy. According to Hobbs (2005a) these conceptual understandings are ideas that provide a theoretical framework

for teachers who would like to teach media literacy. These media literacy principles or key concepts help to attain consensus on the theoretical underpinnings of the field.

Defining the field through conceptual understandings. In 1987, the Ontario Association for Media Literacy (AML), developed a first list of key concepts of media literacy, inspired by media literacy scholars from Australia, Great Britain, and Canada itself (Pungente & O'Malley, 1999). They were particularly inspired by Len Masterman (Pungente & O'Malley, 1999). According to AML (2012), these key concepts provided a theoretical base for all media literacy programs in Canada. These key concepts have also been applied and adapted by many other media literacy scholars and practitioners. For example, Considine and Haley (1999) described seven key concepts of media literacy. Most of their principles are similar to the ones described by AML (which can be seen in Table 1).

Table 1

Media Literacy Key Concepts According to AML (2012)

1. Media texts construct reality
2. Media texts construct versions of reality
3. Audiences negotiate meaning
4. Media messages have economic implications
5. Media texts communicate values messages
6. Media texts communicate political and social messages.
7. Form and content are closely related in each medium
8. Each medium has a unique aesthetic form.

In addition, CML (CML, n.d.) has also created a list of what they consider the key concepts of media literacy, listing key concepts. All five of these are concepts that are also mentioned by the AML. Buckingham (2003) did not number his key concepts, but put them in four categories; production, language, representation, and audiences. In each of these categories he describes many of the same principles as AML did. For example, Buckingham (2003) mentions that production involves the recognition that media texts are consciously manufactured

(similar to the first principle of AML). He also argues that these media texts are mostly produced and distributed for commercial profit, which is in line with AML's fourth principle.

Even though these principles appear related to constructivism and often to the cultural studies approach of mass communication, they can be applied in many different ways in education. For example, the fact that media have social and political implications could lead media literacy educators to protect children from media messages while it could also lead them to prepare children to deal with these media messages by deconstructing them. Instead of focusing on *what* to teach, NAMLE (2007) states that it is important to focus on *how* to teach. NAMLE (2007) has therefore developed other media literacy key principles that relate more closely to how to teach media literacy, as can be found in Table 2.

Table 2

The Core Principles of Media Literacy Education According to NAMLE (2007)

1. Media literacy education requires active inquiry and critical thinking about the messages we receive and create.
2. Media literacy education expands the concept of literacy to include all forms of media (i.e., reading and writing).
3. Media literacy education builds and reinforces skills for learners of all ages. Like print literacy, those skills necessitate integrated, interactive, and repeated practice.
4. Media literacy education develops informed, reflective and engaged participants essential for a democratic society.
5. Media literacy education recognizes that media are a part of culture and function as agents of socialization.
6. Media literacy education affirms that people use their individual skills, beliefs and experiences to construct their own meanings from media messages.

While the media literacy key concepts by AML (2012) appear to align more closely with the nature of media and forms of communication, the principles by NAMLE (2007) seem to align more closer with media literacy education practices, such as how media literacy should be taught. Before more thoroughly explaining which approaches and strategies are often used to teach media literacy, the skills and outcomes that should be taught in order to become media

literate will be explained first.

Media Literacy Skills and Outcomes

Buckingham (2003) argues that media literacy is generally not defined as a fixed body of knowledge, as this body of knowledge would soon become obsolete in our changing technology-rich environment. Rather, many media literacy scholars and organizations have attempted to come up with a rather loose set of skills, which can be applied in a wide variety of subject areas and settings, related to media literacy key principles described earlier. An advantage of a more loose set of skills is that it does not prescribe a specific list of objects of study which makes media literacy education remains responsive to the interests and enthusiasms of students (Buckingham, 2003).

In actual media literacy projects, some of these broad skills have been made much more specific and have taken the form of precise and detailed objectives based on the focus of the project, the type of media used, grade level, subject area, and setting (formal/informal). An example of a program that targets different age groups and subjects is Ithaca College's media literacy program *Project Look Sharp*. This program contains projects on a wide variety of subject areas such as the Middle East, global warming, and war (Ithaca College, 2012). Another example is *Assignment: Media Literacy*, which contains curricula for different age groups on specific topics (Maryland State Department of Education, 2003). Even though many of these more specified media literacy curricula exist, the focus of the next section is on finding consensus on the broader set of skills generally associated with media literacy.

When looking at media literacy definitions, the types of skills that underpin media literacy can be easily noticed. Media literacy has traditionally been defined as the "ability to

access, analyze, evaluate, and communicate information in a variety of forms" (NAMLE,

2007, para. 1). CML (2011) claims that media literacy evolves over time and states that:

> Media Literacy is a 21st century approach to education. It provides a framework to
>
> **access, analyze, evaluate, create and participate** with messages in a variety of forms —
>
> from print to video to the Internet. Media literacy builds an understanding of the role of
>
> media in society as well as **essential skills of inquiry and self-expression** necessary for
>
> citizens of a democracy. (para. 2)

According to Hobbs (2010) there are five essential competencies that are part of both

digital and media literacy. These five competencies appear to be closely tied to the ones

previously described in the definitions of media literacy. The five competencies are to access,

analyze and evaluate, create, reflect, and act. A more detailed description of each of these

competencies can be found in Table 3.

Table 3

Essential Media Literacy Competencies (Hobbs, 2010, p. 19)

1. **Access:** Finding and using media and technology tools skillfully and sharing appropriate and relevant information with others
2. **Analyze & Evaluate:** Comprehending messages and using critical thinking to analyze message quality, veracity, credibility, and point of view, while considering potential effects or consequences of messages
3. **Create:** Composing or generating content using creativity and confidence in self-expression, with awareness of purpose, audience, and composition techniques
4. **Reflect:** Applying social responsibility and ethical principles to one's own identity and lived experience, communication behavior and conduct
5. **Act:** Working individually and collaboratively to share knowledge and solve problems in the family, the workplace and the community, and participating as a member of a community at local, regional, national and international levels

Note. Adapted from "*Digital and media literacy: A plan of action*," by R. Hobbs, 2010. Retrieved from http://www.knightcomm.org/wp-content/uploads/2010/12/Digital_and_Media_Literacy_A_Plan_of_Action.pdf Copyright 2011 by the Aspen Institute. Adapted with permission.

According to Hobbs (2010), these competencies have been acknowledged by professional

organizations and groups such as the International Reading Association (IRA), the National

Council for Accreditation of Teacher Education (NCATE), and the National Council of Teachers of English (NCTE). Hobbs (2010) does not necessarily appear to view certain skills as more complex than others or certain skills as prerequisites to other skills. Two authors who do see the skills related to media literacy rather as a pyramid are Tornero and Varis (2010). Even though the competencies they promote are very similar to the ones described by Hobbs (2010), the pyramid of Tornero and Varis (2010) suggests that the lower skills at the base of the pyramid serve the groundwork for the ones higher in the pyramid. As can also be seen in Figure 1, Tornero and Varis distinguish between competencies related to **access** and **use** at the bottom, competencies related to critical understanding (**analysis** and **evaluation**) and competencies related to communication (creative **production)** at the top.
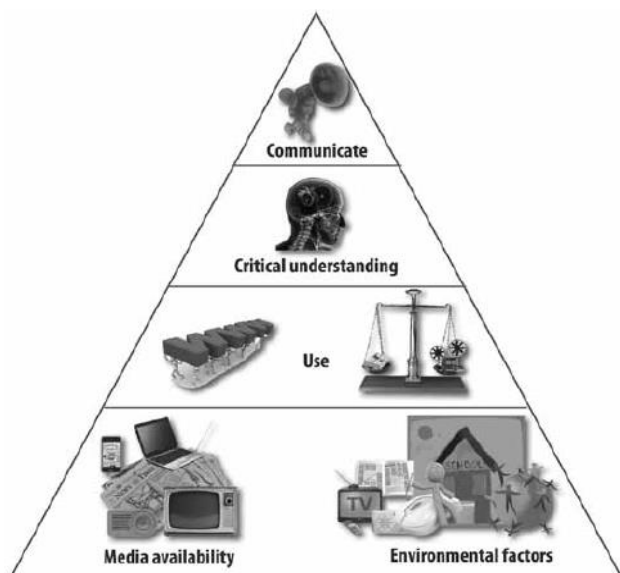
Figure 1. Pyramid of media literacy competences. From "*Media literacy and new humanism*," by J. M. P. Tornero, and T. Varis, 2010, Moscow, Russia: UNESCO/International Institute of Technology for Education, p. 74. Copyright 2010 by UNESCO IITE. Reprinted with permission.

The Partnership for 21st Century Skills (P21, 2011), an organization from the United States advocating a set of skills needed in our contemporary society, also describes a set of skills that underpins media literacy. Their set of competences or skills is somewhat smaller than the ones described by Hobbs (2010) and Tornero and Varis (2010). P21 (2011) divide the skills up in

skills related to analyzing media and skills related to creating media products. Under each larger skillset, they have described a few more precise skills. For example, a more detailed skill which is described under creating media products is to "understand and utilize the most appropriate media creation tools, characteristics and conventions" (P21, 2011, para. 2).

An influential European organization that has described competences related to media literacy is the European Association for Viewer Interests (EAVI, 2010). They make a distinction between personal competences and social competences. They split up personal competences into skills related to the use of media (technical skills) and skills related to critical understanding of media texts (cognitive skills). They relate social competences to communication (communicative and participative skills). Their organization of competences and individual skill dimensions can be found in Table 4.

Table 4

Personal and Social Competences Related to Media Literacy (EAVI, 2010, p. 34)

Competences	Action	Individual skills dimensions	Objectives (Associated operations)
Personal competences	Use	Technical skills *Media operational skills required for the effective use of media tools*	Using Media *Instrumental use*
	Critical Understanding	Cognitive skills *Capacities related to knowledge and semiotic operations: encoding/decoding, interpreting, evaluating media text*	Evaluating and taking account of Media and Media Content *Comprehension and awareness*
Social competences	Communicate	Communicative and participative skills *Capacity to interact with others and maintain networks*	Building Social Relations *Media networking* Participating in Public sphere Citizens' Participation Skills *Active citizenship* Creating and Producing Content *Content creation*

Note. From "*Study on assessment criteria for media literacy levels,*" by EAVI, 2010. Retrieved from http://www.eavi.eu/joomla/images/stories/ Publications/Study2_Assessment/mlstudy2/eavi_study_on_assessment_criteria_for_media_literacy_levels_in_europe.pdf Copyright 2010 by EAVI. Reprinted with permission.

In the same document, EAVI (2010) also put these different competencies in a pyramid similar to Varis and Tornero. They have put skills related to using media at the bottom, skills related to critical understanding one step higher, and skills related to communicating at the top. Pyramids such as these appear to be in line with Bloom's Taxonomy, in which skills in the cognitive domain are ordered from lower to higher orders (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956).

In another report, EAVI (2011) has synthesized media literacy frameworks from the European Commission (EC, 2009), Ofcom (2008), CML (2008), NAMLE (2007), Australian Communications and Media Authority (ACMA, 2009), PIAAC (OECD, 2009), Livingstone, Couvering, and Thumim (2008), EAVI (2011), and Martens (2010). An adapted version with added frameworks of Tornero and Varis (2010), Hobbs (2010), P21 (2011), and one of the earliest definition of skills by Aufderheide and Firestone (1993) can be seen in Table 5.

When looking at the skillsets that these distinct scholars and organizations have formed, it can be concluded that there appears to be some consensus on the skills and competences that underpin to media literacy. Even though different organizations and scholars put different emphases on different skills and even though some organizations and scholars leave out certain aspects, such as media access, the competences related to media literacy are generally related to three different areas: Competences related to access and use of media messages, competences related to critical understanding (analysis and evaluation), and competences related to participation and the production of media messages.

Table 5

Different Frameworks of Media Literacy. Modified from EAVI (2011, p. 20)

	European Commission (EC, 2009)	Ofcom (2008)	(CML, 2008)	NAMLE (2007)	(ACMA, 2009)	PIAAC (OECD, 2009)	Livingstone et al. (2008)	P21 (2011)	Tornero and Varis (2010)	Martens (2010)	EAVI (2011)	Hobbs (2010)	Aufderheide and Firestone (1993)
Access / Use	Access	Access Use	Access	Access	Access	Acquire	Basic access & ownership Navigate Control Regulate		Access (media availability & environmental factors) Use		Use	Access	Decode
Critical Understanding	Analyze Evaluate	Understand	Analyze and explore Evaluate	Analyze Evaluate	Analyze Interpret	Evaluate	Comprehend Critique	Analyze	Critical Understanding	Analyze Evaluate	Critical Understanding	Analysis Evaluate Reflect	Analyze Evaluate
Create / Participate	Communi-cate	Create Communi-cations	Express or create Participate	Communi-cate	Create Communicate	Perform Commu-nicate	Create Interact	Create	Communicate	Produce	Communicate Citizen participation	Create Act	Produce

Note. Adapted from "*Testing and refining criteria to assess media literacy levels in Europe*," by EAVI, 2011. Retrieved from http://www.eavi.eu/joomla/images/stories/Publications/study_testing_and_refining_ml_levels_in_europe.pdf Copyright 2011 by EAVI. Adapted with permission.

Teaching Media Literacy Skills

      Teaching access and use. Even though access and use of media appear primary skills, not many scholars and organizations write about specifically teaching these skills. Hobbs (2005b) argues that even though media literacy is generally defined as the ability to access, analyze, evaluate, and communicate messages in a variety of forms, media literacy education generally emphasizes the twin dimensions of critically analyzing media and creating media messages. It seems that access to media appears a prerequisite for critical understanding and production of media content, as also seen in the pyramids created by Tornero and Varis (2010) and EAVI (2010). According to Livingstone (2003), however, access is not a one-time act of connecting a device. She argues that it is a dynamic and social process. Once initial access is established, media users continually alter the conditions of access by updating, upgrading, and extending equipment and software applications (Livingstone, 2003). This access to media requires technical competence which ranges from installing software to knowing how to use search engines (Hobbs, 2010; Livingstone, 2003). Even though gaining media access does not necessarily determine whether people will actually use media, a lack of access may block the use of media. For example, when a fearful parent will block the access of media to a child, this child may miss out on the use of the internet overall (Livingstone, 2003).

      Teaching critical understanding and media production. Most of the literature dealing with what media literacy should teach is about teaching a critical awareness and creative production in their learners (Hobbs, 2005b). The main skills that students seem to have to learn are critical thinking skills for which a pedagogy of inquiry is proposed (Buckingham, 2003; Hobbs, 1998; NAMLE, 2007). A similar pedagogy is proposed to teach creative production skills. While the production of media messages is often seen as a goal in itself, Buckingham

(2003) argues that it should not be reduced to merely teaching of technical tools. Rather, the teaching of production skills should be accompanied by a pedagogy of inquiry (Buckingham, 2003). This pedagogy of inquiry is described by Tyner (1998) as the glue that unites media analysis and media production. Both media creation and analysis are therefore said to be taught using an inquiry based learning approach (Buckingham, 2003; Tyner, 1998). This pedagogy of inquiry will be explained in more detail in the coming paragraphs.

Media literacy and an inquiry-based approach. The idea of inquiry-based learning is not new (Healey, 2005). While inquiry based learning is often traced back to scholars such as John Dewey, who even wrote a book on the theory of inquiry in 1938 (Dewey, 1938), Kropotkin (1885) already wrote about teaching geography with independent inquiry towards the end of the 19th century. Inquiry learning is defined by Kuhn, Black, Keselman, and Kaplan (2000) as "an educational activity in which students individually or collectively investigate a set of phenomena—virtual or real—and draw conclusions about it." (pp. 496-497). This is only one of many different definitions of inquiry-based learning. In inquiry-based learning, students may lead their own inquiry-based activity and be encouraged to formulate their own questions (Kuhn et al., 2000), but they may also be guided with a fixed set of questions from their instructor (Banchi & Bell, 2008). Banchi and Bell (2008) describe four forms of inquiry that act as a continuum; confirmation inquiry, structured inquiry, guided inquiry, and open inquiry. According to these authors, this continuum focuses on how much information is provided to the learner and how much guidance the teacher will provide, as can be seen in Table 6.

Table 6

Levels of Inquiry and Information Given at Each Level (Banchi & Bell, 2008, p. 27)

Inquiry Level	Question	Procedure	Solution
1—Confirmation Inquiry *Students confirm a principle through an activity when the results are known in advance.*	✔	✔	✔
2—Structured Inquiry *Students investigate a teacher-presented question through a prescribed procedure.*	✔	✔	
3—Guided Inquiry *Students investigate a teacher-presented question using student designed/ selected procedures.*	✔		
4—Open Inquiry *Students investigate questions that are student formulated through student designed/selected procedures.*			

Note. From "The many levels of inquiry," by H. Banchi and R. Bell, 2008, *Science and Children, 46*(2), p. 27. Copyright 2008 by National Science Teachers Association. Reprinted with permission.

Masterman (1985) claims that students should become 'critically autonomous' and argues that this cannot be reduced to an accumulation of facts, ideas, and information about media. Furthermore, he states that it should not involve the dutiful reproduction of the teacher's ideas by students. He therefore suggests that media literacy education lends itself most to an inquiry-based approach to education. Masterman (1985) was one of the first media literacy scholars calling for an inquiry model citing the work of Paolo Freire (1970) as a model (Rogow, 2011). Later on, other scholars such as Tyner also called for an instructional approach that includes inquiry-based learning. According to Tyner (1998), constructivist education recognizes that there is no fixed meaning to media texts and that people produce their own meaning from a wide variety of contexts. Knowledge is therefore constructed. "Teachers build on this tendency to construct meaning by exploiting a variety of methods, including hands-on, learning centered, interdisciplinary, collaborative, and inquiry-based processes to create learning opportunities that encourage students to think for themselves" (Tyner, 1998, p. 198).

According to Rogow (2011), many media literacy scholars and educators have since then proposed an inquiry-based learning approach to create critically autonomous human beings. For

example, Hobbs (1998) states that "the cultivation of an open, questioning, reflective, and critical stance towards symbolic texts should be the center pole of the media literacy umbrella" (p. 27). Similarly, Elizabeth Thoman, who founded the Center for Media Literacy, argues that the principle of inquiry is at the heart of media literacy (Thoman, n.d.). NAMLE (2007) also appears to see the importance of inquiry-based learning and argues that, media literacy education emphasizes critical thinking by asking questions about media messages, which has a pedagogy of inquiry at the center.

Rogow (2011) argues that it is important to describe what is meant with inquiry-based learning as it otherwise will not be consistently translated into media literacy practices, as many scholars seem to mean different things when talking about inquiry. She personally describes it as using "relevant questions to evaluate and analyze media messages and to reflect on the media they create." (p. 180). This means that students should ask questions about all media, not just the ones they disagree with (NAMLE, 2007; Rogow, 2011). Furthermore, students should engage in respectful discussions and stay open to changing their minds as they hear different perspectives and new information. Similar to Rogow (2011), other scholars and organizations view inquiry-based learning generally as the act of asking questions about media messages (Hobbs, 1998; NAMLE, 2007; Tyner, 1998).

According to Rogow (2011), to get students to the place in which they ask questions and engage in discussions, it is important that teachers model media analysis by asking questions. Asking questions about media messages is regarded of main importance in media literacy education. As a result, over the years, numerous inquiry-based models with both fixed and flexible sets of questions have been created by media literacy scholars and organizations. Examples of these models are lists of questions surrounding the key concepts of media literacy

(e.g. CML, 2011; NAMLE, 2007). Other authors have created questions surrounding certain areas of media literacy such as the Text Audience Production (TAP) model (Duncan, D'Ippolito, Macpherson, & Wilson, 1998), in which questions surrounding media texts, their audiences, and the production process play a central role. Bazalgette (1989) created another list with questions about agencies, categories, technologies, languages, audiences, and representations, while Buckingham (2003) created a set of questions related to production, language, representation, and audiences. Most of these questions are open-ended questions such as "What ideas, values, information, and/or points of view are overt? Implied?" (NAMLE, 2007, p. 7) and "How do texts reach their audiences? How much choice and control do audiences have?" (Buckingham, 2003, p. 54).

Coming back to the different levels of inquiry described by Banchi and Bell (2008), media literacy education can focus on any of these levels of inquiry. One the one hand, students can be given a fixed set of questions such as the ones mentioned as a guide when analyzing media messages. On the other hand, students may be asked to come up with their own list of questions or their own topic of investigation. For example, students may be asked to focus on media companies and be asked to investigate the international sale and distribution of television formats such as Big Brother (Buckingham, 2003). To investigate this, they can be asked to come up with their own set of questions. Conversely, students can also be asked to apply a list of previously created questions to their own experiences of media production (Buckingham, 2003). For example, as students create their own media productions, students will have to critically choose a target audience, technologies and methods for their own production. Questions such as "What technologies are used to produce and distribute media texts?" (Buckingham, 2003, p. 54)

and "What difference do they make to the product?" (Buckingham, 2003, p. 54) may be helpful to guide the creations of students' own media productions.

Classroom strategies. An important aspect of media analysis in the classroom is to not have one 'right' answer, but to come up with a variety of plausible and reasonable solutions to problems. Yet, this does not mean that inquiry-based education denies that there may sometimes be one answer nor does it deny the usefulness of memorization (Tyner, 1998). According to Masterman (1985) and Buckingham (2003), the approach should be *dialogic*, meaning that it involves an ongoing dialogue or negotiation between existing knowledge that students already possess, their experience with media, and the new information that the teacher makes available. Media literacy education should therefore provide the students with a way to reflect upon their experiences and to find ways to deconstruct and to view them in a different light. The approach to teach media literacy should also be *dynamic* in the sense that media literacy education should shift between action and reflection and between production and analysis (Buckingham, 2003).

Scheibe and Rogow (2008) from Ithaca College have worked extensively on promoting media literacy by developing *Project Look Sharp*, a media literacy initiative created in cooperation with many media literacy organizations. They describe some classroom strategies that can be used to improve media literacy skills. They argue that general observation, critical thinking skills, analysis, perspective-taking, and communication skills can be improved by asking students questions on a regular basis to help them think critically about media messages and information used in schools and at home (Scheibe & Rogow, 2008). They also state that it is important for teachers to make their own decision-making process visible by explaining how they choose and assess media used in class, for example. Scheibe and Rogow (2008) also recommend to point out ways in which media messages may be interpreted differently by

different people and by allowing students to go beyond the curriculum itself by asking to identify and discuss certain aspects of a media message, such as the techniques used to attract attention. In addition, Scheibe and Rogow (2008) recommend media production to practice certain skills and to encourage older students to teach production techniques to younger students.

Hobbs (2010) also mentions some general techniques and methods that can be used to foster the analytical critical skills needed to be media literate. Media composition (or production) is one of them. Other techniques mentioned by Hobbs (2010) are keeping a media diary, using search and evaluation strategies, actively reading, viewing, listening, and discussing, cross-media comparison, close analysis, games, simulations, and role play. In these instructional practices, it is crucial that instructors foster a learning environment in which students' experiences are valued and multiple viewpoints are encouraged (Hobbs, 2010). As is generally the case in media literacy, inquiry-based learning is important as students carefully investigate and examine media texts using critical questioning in close analysis, actively interpret texts when reading, viewing, and discussing, and carefully evaluate content from a variety of sources using information search and evaluation strategies. According to Hobbs (2010), this approach "activates independent thinking, authentic dialogue, collaboration, reflection, creativity, and social responsibility" (p. 24) as students react to, create, and share media messages.

Dual role of media production. As mentioned earlier, Scheibe and Rogow (2008), as well as Hobbs (2010), recommended the use of media production in media literacy education. Buckingham (2003) argues that production has been accepted as one of the central elements and outcomes of media literacy education. Similar to alphabetical literacy, media literacy should include both the 'reading' and 'writing' of media texts. According to Buckingham (2003), media production has to be accompanied by a form of reflection which should include the students'

objectives, an evaluation of what they have achieved, and a reflection on the process of production. According to Buckingham (2003), media production is inherently social as the reception of media productions is always guided by social conventions (language and genres) of meaning construction. In addition, production is social in the sense that media production often requires a range of personnel, in which each student exhibits a different role.

Media production generally requires some technical skills and knowledge of linguistic and artistic conventions (such as the use of certain shots), but this should not be the main point of media production (Buckingham 2003; Hobbs, 2010). Furthermore, the product should not be seen as the end of the process, but as a starting point for reflection and further inquiry (Buckingham, 2003). According to Buckingham (2003), this reflection is central and an irreplaceable aspect of media production and should therefore be woven into the production process. Media production therefore not only an outcome of media literacy education but also serves as a strategy to foster analytical skills.

Media literacy and areas of knowledge. Many media literacy scholars do not only regard a broader media literacy skillset of main importance, but certain scholars also define central knowledge areas for teaching media literacy. For example, Masterman (1985) identifies a set of topics that students should have knowledge about. These include ownership and control, media institutions, the state and the law, self-regulation by the media, economic determinants, advertisers, audiences, media personnel, and media sources. He argues that this list is not exhaustive and that teachers can adapt this list wherever necessary. Scholars such as Duncan et al. (1998) and Rosenbaum (2007) argue that knowledge and skills surrounding the producer, audience, and media text itself are important. Moreover, Martens (2010) argues that important

knowledge areas are those of media industries, media messages, media audiences, and media effects.

Context of Media Literacy Education

According to NAMLE (2007), media literacy should be taught across the pre-K-12 curriculum and can be integrated into nearly any subject area. Generally, media literacy scholars and organizations see the value of embedding media literacy within the context of existing subjects (NAMLE, 2007; Scheibe & Rogow, 2008). Hobbs (1998, 2010) argues that media literacy can be applied across all grade levels and in subject areas such as social studies, science, English language arts, health education, math, and arts. Hobbs (2010) argues that it can even be used in vocational and professional fields. Media literacy is taught in formal pre-K-12 settings, but they can also be taught in more informal educational settings (Hobbs, 2010).

Many in the practitioner community believe that media literacy education should not be a one-time event or single course, but must rather be integrated in the curriculum as a routine and repeated practice, just as was done with print literacy (Scheibe & Rogow, 2008). Similarly, NAMLE (2007) argues that media literacy skills cannot be learned by a single event, class, day, or even week-long intervention. Furthermore, Scheibe and Rogow (2008) argue that it is more effective if media literacy is routinely integrated instead of treated as a special or isolated topic. According to Hobbs and Frost (2003) and Hobbs (2011) however, teaching media literacy as a separate subject over a longer term can also be advantageous. A positive aspect of this approach is that critical analysis and creative production can be explored in a more focused and more formal way. One of the downsides Hobbs (2011) mentions is that separate courses sometimes only reach a tiny population as they are often only offered as electives. When integrating media literacy in a specific subject, it is important to consider the texts used in the classroom beyond

their function as conveyors of information (Hobbs, 1998). It is vital to use these media messages as objects of inquiry (Hobbs, 1998; Kress, 1992) and to view media literacy analysis and production as a way to examine connections across different subjects and fields (Davison, 1992; Hobbs, 1998). Since media literacy is not tied to a specific set of media messages, tools, or technologies, it can be applied to any setting, technology, grade level, and subject area.

Scheibe and Rogow (2011) recently published a book for teachers entitled *The Teacher's Guide to Media Literacy: Critical Thinking in a Multimedia World*. In this book, Scheibe and Rogow describe how media literacy can be integrated into any subject area to promote critical thinking. Examples of strategies that teachers can use to integrate media literacy in their curriculum are replacing generic exercises or questions with media-related examples, modeling the use of non-print along print media as information sources, having students apply key questions to their writing and other creative projects, and actively facilitating 'writing' in multiple media modes.

In addition, Scheibe and Rogow (2011) describe in their book how media literacy can be integrated into specific content areas such as English language arts, social studies, science and environmental studies, math, health and consumer education, fine arts, physical education and sports, modern languages, second language learners, and how media literacy can be applied interdisciplinary. Another media literacy scholar describing the integration of media literacy across the curriculum is Hobbs (2005b). She describes existing research on the effectiveness of media literacy education in subject areas as health education, social studies, English language arts, communications, and the fine and performing arts (Hobbs, 2005b). When looking at recent media literacy research on integrating media literacy into specific subject areas, one subject area expecially stands out; health education. Compared to other subject areas, this area is particularly

well-researched when it comes to assesment of media literacy in the health education curriculum. According to Hobbs (2005b), health educators have possibly more than instructors of any other subject area adopted media literacy as a promising practice. Overall, however, research assessing the effectiveness of media literacy interventions is still rather new and scarce (Bergsma & Carney, 2008; Potter, 2013).

Before describing how media literacy skills are often assessed by media literacy scholars and professionals, general principles of educational assessment, assessment of higher order thinking (which closely relates to many media literacy skills), and common challenges and issues with assessing these skills will be described first.

Educational Assessment

General principles of educational assessment

Nitko and Brookhart (2011) define educational assessment as "a process for obtaining information that is used for making decisions about students; curricula, programs, and schools; and educational policy" (p. 3). It is implied from this definition that assessments can serve different purposes. Assessment can be used to assist student learning, to measure students' individual achievement, and to evaluate programs (National Research Council, 2001). Nitko and Brookhart (2011) add that assessment can also be used to make decisions about district, state, and national policy. According to the National Research Council (2001), one type of assessment does not fit all, as different educational decisions may require different assessment methods.

Educational assessment is therefore beneficial to help administrators and educators make decisions. Assessment is not only a crucial element in the instructional design process (Dick, Carey, & Carey, 2009) and educational research (Wyatt-Smith & Cumming, 2009), it is also a crucial element in the lives of educators. According to Stiggins (2004), teachers spend on

average a quarter to a third of their class time engaged in assessment related activities. In addition, assessments for accountability purposes have been supported by governments and policy makers globally (Wyatt-Smith & Cumming, 2009).

Since assessment is a key activity of teachers, a key focus of educational research (Wyatt-Smith & Cumming, 2009), and often used to make high-stakes decisions (Nitko & Brookhart, 2011), it is important that assessment is planned, conducted and interpreted in valid and reliable ways. Developing assessments for students involves certain principles or guidelines. First, it is important to specify clearly which objectives or learning targets need to be assessed (Brookhart, 2010; Dick, Carey, & Carey, 2009; Nitko & Brookhart, 2011). It is crucial that chosen assessment techniques match each of the learning targets (Nitko & Brookhart, 2011) and that the assessment tasks therefore require students to demonstrate the learning target (Brookhart, 2010). These assessment tasks should also be in line with the provided instruction. Airasian and Miranda (2002) state that if instruction and assessment are aligned well with the stated objective, the assessment results are likely to be reasonably valid. However, if these components are not well aligned, the assessment results will likely be questionable (Airasian & Miranda, 2002). The development of high-quality learning targets therefore plays an important role in assessing these learning targets.

Taxonomies of Learning Targets

It may be difficult to develop learning targets offhand. Scholars have therefore developed taxonomies of learning targets. Such taxonomies can help educators and scholars classify learning targets based on their domain of learning, complexity, and level of abstraction. They can also help educators choose assessment strategies as different types of learning targets often call for different types of assessments. Scholars have developed many taxonomies, often covering

different domains of learning. Bloom et al. (1956) identified three domains of learning: The

cognitive domain, affective domain, and psychomotor domain. Bloom et al. (1956) have

developed taxonomies for the cognitive and affective domain of learning. Of the three domains

of learning identified by Bloom et al. (1956), the cognitive domain appears to have gained the

most attention. The type of skills sought after by media literacy scholars also largely relate to the

cognitive domain. Since there is more than one way to classify learning targets, different

taxonomies have been created. Examples of taxonomies for the cognitive domain have been

developed by Gagne, Briggs, and Wager (1992), Quellmalz (1985), Jonassen and Tessmer

(1996/97), and Bloom et al. (1956). The latter taxonomy by Bloom et al. (1956) is widely known

(Krathwohl, 2002) and had an enormous influence on educational practice (Nitko & Brookhart,

2011). Among other things, Bloom believed this taxonomy could help align learning targets,

activities, and assessments (Krathwohl, 2002). This taxonomy consists of six levels: Knowledge,

comprehension, application, analysis, synthesis, and evaluation (Bloom et al., 1956). These

levels are ordered from simple to complex and concrete to abstract (Krathwohl, 2002). To be

more in line with current educational and psychological research, Bloom's taxonomy (Bloom et

al., 1956) has been revised by Anderson et al. (2001). This taxonomy is therefore often called the

revised taxonomy. Rather than one dimension in the original taxonomy, the revised taxonomy

has two dimensions, consisting of the knowledge dimension and the cognitive process

dimension. The cognitive process dimension is fairly similar to the original taxonomy and

consists of: remember, understand, apply, analyze, evaluate, and create. Similar to the original

taxonomy, these are loosely ordered based on complexity (Krathwohl, 2002). The knowledge

dimension consists of factual knowledge, conceptual knowledge, procedural knowledge, and

metacognitive knowledge. A learning target often consists of a verb and a noun, such as:

Students will be able to analyze tobacco advertisements. The noun (in this case "tobacco advertisements") forms the basis for the knowledge dimension while the verb provides the basis for the cognitive process dimension (in this case "analyze").

Assessing Higher Order Thinking Skills: Analysis, Evaluation, and Creation

As described in the previous section on media literacy skills, media literacy often calls for the more complex and abstract skills of the taxonomies dealing with the cognitive domain. Media literacy scholars and educators often expect students to "analyze, evaluate, and create" media messages and to think critically. These skills match the more complex categories of cognitive taxonomies.

Higher order thinking skills. These more complex and abstract skills are often referred to as higher order thinking skills. Even though Bloom et al. (1956) did not specifically define higher order thinking in their Taxonomy of Educational Objectives, much of the writing on higher order thinking referenced their classification in the cognitive domain, with the movement from knowledge to evaluation signifying the movement from lower order to higher order thinking (Alexander et al., 2011). Even though there has been criticism on a dichotomizing higher order and lower order skills, this division of lower order thinking (knowledge, comprehension and application) and higher order thinking (analysis, synthesis and evaluation) dominates educational research (Alexander et al., 2011).

Not all scholars directly tie higher order thinking to Bloom's taxonomy (Bloom et al., 1956) however, even though many scholars do acknowledge the complexity involved in higher order thinking and the transformative nature of higher order thinking. For example, Lewis and Smith (1993) assert that "higher order thinking occurs when a person takes new information and information stored in memory and interrelates and/or rearranges and extends this information to

achieve a purpose or find possible answers in perplexing situations" (p. 136). This is a broad and encompassing definition that includes problem solving, critical thinking, creative thinking, and decision making (Lewis & Smith, 1993). More recently, Shraw and Robinson (2011) define higher order thinking skills as "skills that enhance the construction of deeper, conceptually-driven understanding" (p. 2). Closely related to Shraw and Robinson's definition is Alexander et al.'s (2011) more detailed definition. Alexander et al. (2011) view higher order thinking as "the mental engagement with ideas, objects, and situations in an analogical, elaborative, inductive, deductive, and otherwise transformational matter that is indicative of an orientation toward knowing as a complex, effortful, generative, evidence-seeking, and reflective enterprise" (p. 53).

Assessing higher order thinking. Even though higher order thinking encompasses a range of skills and is embedded in different domains and the assessment, higher order thinking and its assessment have some generalizable features (Shraw, MrCrudden, Lehman, & Hoffman, 2011). For example, Shraw and Robinson (2011) argue that higher order thinking skills need to be assessed using a broad range of methods and occasions, including the increased use of qualitative methods such as performance assessments and interviews. Assessing these skills on multiple occasions will enhance the validity of the assessment (Nitko & Brookhart, 2011). Brookhart (2010) states that there are three principles that apply specifically to assessing higher order thinking. First, she asserts that it is essential to present students with something to think about, such as an introductory text, visuals, a scenario, resources, or problems (Brookhart, 2010). Second, she states that it is important that higher order thinking is assessed using novel materials (Brookhart, 2010). This is material that is new to the student and not previously covered in class. Nitko and Brookhart (2011) state that it is useful to use context-dependent items for this purpose. Third, Brookhart (2010) claims it is important for educators to discern between the level of

difficulty (easy versus) and the level of thinking (lower order versus higher order thinking), as more difficult questions are not necessarily higher order thinking questions and vice versa.

Even though authors like Nitko and Brookhart (2011) argue that novel and context-dependent items can be used using any type of assessment, including multiple-choice items, Lane (2010) argues that research has shown that the format of the assessment can impact the types of thinking that are used by students. For example, in their guide *Assessing Higher Order Thinking Skills*, Arter and Salmon (1987) wrote that instruments using structured formats do not always measure higher order thinking as they often require one answer to be correct. In addition, these instruments are often focused on the answers rather than the process (Arter & Salmon, 1987). Similarly, Ennis (1993) claims that open-ended assessments are better to assess critical thinking skills than multiple-choice tests. In line with this argument, Lane (2010) more recently argues that performance assessments more suitable to assess high order thinking skills, compared to more restrictive test formats. Leighton (2011) states that performance assessments are "believed to be better candidates for eliciting and measuring higher order thinking skills than traditional multiple choice items because they require the complexity of skills of real-life problem solving" (p. 86). Examples of performance assessments are projects, portfolios, research papers, critiques, self-assessments, visuals observations, and writing samples (Leighton, 2011).

An often controversial topic around both teaching and assessing higher order thinking skills is whether these skills have to be taught and assessed in a domain-general or domain-specific way. Some scholars would argue that there are some general strategies that can be learned and applied in many different domains. According to Ennis (1989), this approach does not require content, and could simply include teaching the implications of principles such as "all As are Bs." Many others scholars, such as Resnick (1987) support the immersion of higher order

thinking in specific domains. Based on a more recent comprehensive literature review, Billing (2007), would argue that general and specific (or contextualized) skills are not mutually exclusive, but rather complementary and synergistic. Billing (2007) states that general strategies could aid transfer, but "that they always function in contextualized ways by operating on domain knowledge" (p. 512). According to Shraw and Robinson (2011), it is important that "higher order thinking is cultivated in a specific setting through practice and coaching rather than attributable to domain-general abilities per se" (p. 12). Even though many scholars do acknowledge benefits of domain-general strategies and principles of higher order thinking, it appears that most authors would agree that these principles would be best be applied in context-specific ways. Therefore, it would be most appropriate to assess these skills in a specific domain.

A context-specific assessment approach would align with literature on the contextualization of media literacy skills. According to Scheibe and Rogow (2011), students, especially the younger ones, do not automatically translate media literacy skills from one area to another. Similarly, Martens (2010) argues that it is not clear whether the critical thinking skills related to media literacy learned in school transfers to everyday media consumption. Martens (2010) argues that "influencing children's and adolescents' knowledge and skills will not necessarily transfer to everyday mass media consumption" (p. 15). According to Scheibe and Rogow (2011) students will not automatically think critically about media unless they are specifically taught how to do so. By teaching students to analyze all types of media, including the media that students create themselves, teachers avoid unintentionally suggesting that students only need to think critically about some media forms and content some of the time (Scheibe & Rogow, 2011). It therefore seems important that media literacy is embedded and assessed in all subject areas of the curriculum at all grade levels, rather than be taught and assessed as a specific

course. In addition, it may be beneficial that the teaching of these higher order thinking skills would be combined with the use of feedback, meta-cognitive strategies, and the teaching of key concepts or principles together with examples (Billing, 2007; Bransford, Brown, & Cocking, 2000). Whether media literacy would best be taught and assessed in context has never been empirically studied, however.

In the previous section, some communalities regarding higher order thinking assessment have been discussed. For example, it is suggested that the assessment of higher order thinking should be conducted using a broad range of methods and occasions. In addition, it should present students something novel to think about and apply a range of assessment instruments, such as performance assessments. Moreover, these skills are often applied in context-specific ways. In the next section, common challenges to assessing higher order thinking will be discussed.

Issues and Challenges Regarding Assessing Higher Order Thinking Skills

Airasian and Miranda (2002) state that "the need to assess higher order cognitive processes and metacognitive knowledge poses challenges for all who are engaged in the assessment field" (p. 38). According to Shraw et al. (2011), good thinking relates to a variety of skills that cannot be taught in a short time. They claim that it is therefore challenging to define what is meant by good thinking and to translate this into standards and a curriculum. If the specific thinking skills are not defined well, it is not possible to assess these. Leighton (2011) argues that models defining higher order thinking skills have recently been developed but that there is a lack of empirical research supporting that these higher order thinking models can be used to generate assessments eliciting these skills and knowledge.

Another challenge regarding the assessment of higher order thinking relates to the context-dependent items that are often used to assess higher order thinking, as these context-

dependent items come with disadvantages. Nitko and Brookhart (2011) claim that these items are often difficult to construct. Introductory material must be carefully developed and often requires certain skills and technologies that may not readily be available (Nitko & Brookhart, 2011). In addition, performance on one context-dependent item set may not generalize well to performance on a similar set and the items often require students to use abilities that are not the focus of the assessment (Nitko & Brookhart, 2011). For example, a student may also need to have reading comprehension and writing skills in order to analyze or create an advertisement. This may be unrelated to the learning target. In addition, the use of performance assessments, a type of assessment often used to assess higher order thinking (Lane, 2010, Leighton, 2011), also has its disadvantages. These types of assessments can be time consuming to develop and score for instructors and time consuming for students to complete (CALA, 1998; Nitko & Brookhart, 2011). Moreover, such assessments may have a lower scorer reliability (Nitko & Brookhart, 2011). Since a task may be complex and can have multiple correct responses, different instructors may score the same assessment task differently. Scoring guides or rubrics with clear and specific scoring procedures may increase the scorer reliability.

Furthermore, performance assessments are often very context specific, which may be a cause for unreliable content sampling (Nitko & Brookhart, 2011) and they may therefore lack generalizability (CALA, 1998). According to Nitko and Brookhart (2011), an instructor may need to use six or seven performance assessments to reliably assess a student's performance on a complex learning target. A performance assessment assessing higher order thinking may therefore require students to use many skills and abilities over a significant amount of time and contexts. Often, for practical reasons, only a limited number of complex tasks may be given to

assess students, which may limit the scope of the assessments (Nitko & Brookhart, 2011). This may threaten the content validity of the assessment.

Novelty may also be a reason for issues regarding the assessment of higher order thinking. For example, while certain students may answer a question using higher order thinking skills, another student, who may have previously practiced the same question in class, may arrive at the answer through recall, a lower order thinking skill (Brookhart, 2010; CALA, 1998). Novelty could therefore be problematic as certain items may be novel to certain students, but not to others. Items therefore measure higher order thinking only to the extent that they are equally novel to all students (Arter & Salmon, 1987).

Leighton (2011) claims that the use of a taxonomy and standards does not promise that students will actually use those levels of thinking as they respond to these items. Krathwohl (2002) asserts that even though educators often aspire to assess higher order thinking, analyses have shown that objectives requiring only recall or recognition of information are often heavily emphasized (Krathwohl, 2002). For example, Bol and Strage (1993) conducted a study to explore the relationship between stated objectives by 10 biology teachers and the types of assessment items found on tests. Even though one of the main aims of the teachers was to develop higher order thinking skills, their assessment practices did not support these aims. More than half of test and practice items only required basic knowledge and almost two-thirds of the assessment items were recognition items (Bol & Strage, 1993). Similarly, Gierl (1997) found that there was only a 53.7% match between cognitive processes expected from test developers and cognitive processes observed from the students.

Media Literacy Assessment

Two Philosophical Perspectives regarding Media Literacy Assessment

When looking at how media literacy is assessed by media literacy scholars and organizations, there appear to be two different philosophical perspectives (Martens, 2010; Scharrer, 2002). The outcomes of media literacy education and the way media literacy is assessed depend on this philosophical orientation.

The first way media literacy is assessed relates to the protectionist approach that has been described earlier in this literature review. Even though this paradigm is generally viewed as outdated by numerous media literacy scholars today (Buckingham, 2003; Hobbs, 2005a; Masterman, 1985; NAMLE; 2007; Scheibe & Rogow, 2011; Tyner, 1998), it is predominant when looking at how scholars assess media literacy skills. It appears that this view is especially prevalent among media literacy scholars who do research related to public health, even though Higgins and Begoray (2012) have recently called on health media literacy scholars to move away from this protectionist view. For protectionist media literacy scholars, media literacy education's target is to prevent harmful media effects (e.g. Jeong, Cho, & Hwang, 2012), such as media violence (e.g. Byrne, 2009; Scharrer, 2005, 2006), substance abuse (e.g. Austin & Johnson, 1995, 1997a, 1997b; Kupersmidt, Scull, & Austin, 2010; Pinkleton, Austin, Cohen, Miller, & Fitzgerald, 2007), and females' negative body image (e.g. Berel & Irving, 1998; Chambers & Alexander, 2007; Fuller, Damico, & Rodgers, 2004; Irving & Berel, 2001; Reichert, LaTour, Lambiase, & Adkins, 2007; Wheeler, 2009). According to Martens (2010), there are a few reasons for this defensive approach to be very prevalent among media literacy researchers, even though it is often seen as outdated by many other media literacy scholars. First, this approach is most likely to get funded and to get broader approval from parents, school administrators, and

the government, as it is a way to "sell" media literacy education (Kubey, 2003). It appears easier

to get funding to do research on whether media literacy may reduce obesity, violence, and

negative body images in women compared to whether media literacy may aim to advance a more

general critical autonomy. Furthermore, Martens (2010) adds that it seems absurd to teach

children how to watch television in the current cultural and educational atmosphere.

Media literacy in this paradigm is mainly assessed in more quantitative and controlled

settings (Martens, 2010) compared to the second philosophical paradigm in which media literacy

is preferred to be assessed in more qualitative ways and in authentic settings. Bergsma and

Carney (2008) analyzed 28 interventions related to media literacy education and health. Media

literacy interventions in this field frequently, but not always, use a more protectionist approach to

media literacy education and assessment. When looking at the research designs common in this

area, Bergsma and Carney (2008) found that health media literacy was assessed in classroom

settings in most of these studies and that all studies had a quasi-experimental design. This means

that the subjects were not randomly assigned to different groups and that the researchers actually

take into account some authentic aspects of the learning environment. The designs of the studies

varied widely, ranging from Solomon four-group designs (i.e. Austin & Johnson 1995, 1997a,

1997b), to pre-test/post-test designs (i.e. Coughlin & Kalodner, 2006; Evans et al., 2006; Rabak-

Wagener, Eickhoff-Shemek, & Kelly-Vance, 1998), to post-test only designs (i.e. Austin,

Pinkleton, & Funabiki, 2007; Irving & Berel, 2001; Irving, DuPen, & Berel, 1998). Most of the

research used quantitative measures and a few used some qualitative measures in addition to

quantitative measures. One used qualitative measures only (focus groups) (Fuller et al., 2004).

The second philosophical approach to media literacy assessment is the cultural studies

approach. This approach has as its goal to prepare children to function in society. It greatly

emphasizes students' own, often enjoyable, experiences with media (Scharrer, 2002). Even though many media literacy scholars and organizations agree that this is the path media literacy education is headed towards and even though this dominates the theoretical literature (see Buckingham, 2003; Hobbs, 2005a; Masterman, 1985; NAMLE, 2007; Scheibe & Rogow, 2011; Tyner, 1998), this approach is much less prevalent when looking at actual research on media literacy assessment. While assessment in the first approach appears to be grounded in a more objectivist paradigm, this is much less the case in the cultural studies approach (Martens, 2010). Since truth and reality in this latter paradigm are viewed as constructed, this may also have an impact on views towards assessment. Scharrer (2002) argues for example that scholars within the cultural studies approach may have an issue with predetermined learning outcomes of media literacy education set by instructors or scholars, as they may see that as paternalism (Scharrer, 2002). People taking this philosophical approach may therefore disagree with the beliefs that the instructor may impose on students, especially when the delivery of the instruction is top-down (Scharrer, 2002). Assessment in this view is generally described within complex and authentic contexts and often includes, but is not completely limited to more qualitative assessment strategies. For example, Bragg (2002) used classroom observations of 16 and 17 year-old students to draw conclusions on the effectiveness of media literacy education and ways it can be improved. Caronia (2009) described and analyzed audiovisual recorded interactions of children participating in an in-context peer co-viewing activity in an Italian school. Caronia (2009) claims that "the social interactions and talk that occur during co-viewing are tools through which children collectively make sense of television, orient each other to the text, and construct understanding as an interactive achievement and a socially organized process" (p. 267).

Even though these two approaches seem opposite to each other, Martens (2010) argues that these two views should not necessarily be seen as mutually exclusive. He claims that they may rather complement each other. He argues that they may offer valuable insights on a single faceted phenomenon: The effectiveness of media literacy education. Proponents of both approaches have as their main goal to develop critical thinkers, even though their purposes and approaches to assessment differ. While most public health scholars assess media literacy education by linking psychological constructs with media literacy outcomes in controlled research environments, scholars taking a cultural studies approach tend to describe and assess media literacy education within complex real-life contexts (Martens, 2010). In the next paragraphs, some different ways that media literacy has been assessed will therefore be described without discriminating based on the philosophy taken. First, general approaches taken to measure components of media literacy will be described. This will be followed by a description of the specific instruments that have been used to measure media literacy. This will be concluded by a short discussion on challenges regarding media literacy assessment.

Methods of Assessing Media Literacy

      Measuring other constructs. Interestingly, many authors do not measure media literacy by creating or using a specific media literacy instrument. Rather, other variables are measured in order to assess whether the media literacy education was effective. For example, Byrne (2005) looked at the willingness to use aggression in a group of children to examine whether the media literacy education they received was effective. Byrne (2005) adapted a scale from Nathanson and Cantor (2000) who conducted a study on active mediation. It appears that Byrne sees children as media literate as long as negative side-effects that may be caused by using media, such as willingness to use aggression, are reduced.

Another example of this phenomenon is evident when looking at a study conducted by Wade, Davidson, and O'Dea (2003). After receiving media literacy education, these researchers assessed whether the instruction was effective by looking at a change in eating disorder risk factors, body dissatisfaction, weight concern, and self-esteem. The scales used for this study were taken from the Eating Disorder Examination Questionnaire (EDE-Q) from Fairburn and Beglin (1994), a body dissatisfaction measure developed by Stunkard, Sorenson, and Schlusinger (1983), and the Self Perception Profile for Adolescents to measure self-esteem (SPPA) created by Harter (1986). Similarly, Evans et al. (2006) assessed the effectiveness of a media literacy intervention by measuring children's food and vegetable consumption, the availability and accessibility of fruits and vegetables at home, and parental social support.

Measuring selective components of media literacy. Before discussing the few media literacy instruments that are currently available, it is important to mention that many other researchers have attempted to measure media literacy by measuring specific components of media literacy. For example, Vraga, Tully, and Rojas (2009) attempted to assess the effectiveness of a media literacy training by studying whether it reduced students' perception of bias. Apparently, people with a strong opinion about a certain issue regard articles on that given topic as biased against their point of view (Vraga et al., 2009). The authors expected that people would perceive a topic as less biased after receiving media literacy training. The effectiveness of media literacy education was in this case assessed by measuring students' perception of bias of a news story. Perception of bias could be regarded as a small component of the much broader skillset of media literacy. To measure people's perception of bias, Vraga et al. (2009) simply asked people to rate a news story from 0 (biased) to 10 (unbiased). No information was given about the reliability or validity of this scale.

Similarly, media literacy is often measured by measuring elements such as 'perceived realism of media messages' (Austin & Johnson, 1995; Irving and Berel, 2001; Kusel, 1999; Pinkleton et al., 2007; Vooijs & van der Voort, 1993), This is often measured together with other variables related to the subject area such as identification with models and body image measures (Irving and Berel, 2001), behavior intent towards smoking (Pinkleton et al., 2007), social norms for alcohol use (Austin & Johnson, 1995), and factual knowledge about real violence and that portrayed on television (Vooijs & van der Voort, 1993). It is assumed that the less real media messages are perceived to be, the more media literate people are, and the less likely they then are to engage in certain negative behaviors, such as smoking, drinking alcohol, or having a negative body image. Measuring elements such as perceived realism towards media messages are part of developing a critical attitude towards media messages. However, such elements generally only form one component of media literacy rather than a whole skill set.

Assessing media literacy as a construct. In the cases just presented, the effectiveness of media literacy education is often assessed by looking at the effect media literacy education had on external variables (such as willingness to use aggression, or body image) or by looking at specific components of media literacy (such as perception of bias or perceived realism), often in addition to skills related to the context or area in which the media literacy education took place (such as specific items on knowledge on real and depicted violence).

There are also some media literacy scholars who have attempted to measure media literacy as a whole by creating specific media literacy instruments. Some of these researchers have still embedded these instruments in specific contexts (such as media literacy and smoking), but different from the previously mentioned researchers, they have attempted to define and measure media literacy as a whole skillset. These instruments will be discussed next.

Media Literacy Instruments

Bergsma and Carney (2008) recently reviewed literature on media literacy and concluded that research assessing the effectiveness of media literacy education is still in its infancy. Martens (2010) asserts that "researchers should urgently develop more valid and reliable research instruments to aptly capture media learning outcomes" (p. 15). To this day, there are only a few media literacy scales available, which will be explained here in more detail.

As one of the first, Quin and McMahon (1995) evaluated two media literacy tests developed by a panel of teachers. These two tests were pre-piloted, piloted, and modified before the formal testing started (Quin & McMahon, 1995). In the first test, students were asked to analyze three print advertisements, while in the second test, students were asked to analyze a television clip from a sitcom. In both tests, the students examined language, narrative, audience, and other areas of media analysis. A total of 1425 students took either one or both tests. After reading the print advertisements or viewing the television clip, the students were asked questions, including open ended ones. The answers were placed among a continuum by the teachers. Even though these measurements seemed to properly measure various aspects of media literacy as emphasized in various conceptual media literacy models, the authors did not provide any extensive psychometric properties of their assessment instrument (Arke & Primack, 2009).

While Quin and McMahon (1995) mostly focused on media analysis, Sherry Wulff (1997) described how Alverno College created a media literacy assessment instrument measuring media use, media interpretation, and media creations for students of Alverno College. Similar to Quin and McMahon, media literacy was assessed as a continuum. For each of the three components (using, interpreting, and creating) students were assessed on a four level scale. For example, a student in the first level of creating media "creates media that are readable and

accessible to an audience" (Wulff, 1997, p. 137), while a student in the fourth level "develops, within discipline-related contexts, relationships among frameworks, knowledge, and outcomes" (Wulff, 1997, p. 138). Like the measure created by Quin and McMahon (1995), this assessment instrument did not appear to be tested for validity or reliability.

Several years later, Hobbs and Frost (1998) adapted Quin and McMahon's (1995) tests. After students watched a news program, Hobbs and Frost (1998) measured their comprehension skills, media consumption habits and behaviors, and media literacy skills. Media literacy skills were measured by five open-ended questions in which students were asked to identify the target audience and sources, differences and similarities between the news program and local or network news, techniques designed to attract attention, and the ability to identify facts which were absent from the segment. The authors did not provide any data on reliability or validity. In 2003, Hobbs and Frost adapted their measures and tested 11th grade English language arts students' reading comprehension, writing skills, critical reading, critical listening, and critical viewing skills for non-fiction informational messages. Hobbs and Frost (2003) argued that they enhanced the face validity of their instrument by designing the instrument to be similar to the five critical questions that teachers also used in the classroom to improve students' critical thinking skills. Hobbs and Frost (2003) found that the students engaged in the media literacy course improved on the measures, while a control group did not, which implies that the instrument had some level of criterion validity. However, other measures of validity and reliability were not evaluated.

One of the first well-tested scales in which media literacy is measured as a whole relates to smoking media literacy. Even though it specifically relates to smoking, the most common media literacy key principles are measured in the instrument. The scale is created by Primack et

al. (2006) for high school students and adapted by Primack, Sidani, Carroll, and Fine (2009) for college students. The face validation of this measure is based on the theory of reasoned action, which has been used to predict adolescent smoking (Ajzen & Fishbein, 1980; O'Callaghan, Callan, & Baglioni, 1999; Unger et al., 1999). According to this theory, an individual's behavior is determined by the person's intent to carry out the behavior, which is in its turn predicted by the person's attitude toward the behavior and perception of norms regarding to this behavior (Ajzen & Fishbein, 1980). According to Primack et al. (2006), media literacy theoretically influences both students' attitude about smoking and their perception of norms about smoking. To develop the media literacy scale, the authors looked at two predominant theoretical media literacy models and combined ideas from both to create items for the development of the scale. The items were related to authors and audiences, messages and meanings, and representation and reality, similar to NAMLE's (2007) later questioning model.

The scale initially consisted of 120 questions measuring eight concepts. These items were reviewed by a convenience sample of eight leading national experts in media literacy, tobacco control, and public health (Primack et al., 2006). Furthermore, two-hour long focus groups were held with 9th to 11th grade adolescents in two schools. One focus group was held at a mainly white high school in a middle-income neighborhood, while the other one was held at an African-American high school with low-income students. Based on the expert reviews and focus groups, questions were altered or deleted, resulting in 51 items. Consequently, 1211 high school students filled out a survey containing these items, in addition to demographic data, smoking-related data, and covariate information (Primack et al., 2006). Next, the data was further refined by conducting an iterative principle components analysis (PCA) using varimax rotation (cutting off factor loadings lower than 0.45). Subsequently, 18 items remained, which were qualitatively

analyzed to confirm they appeared to measure smoking media literacy instead of other constructs. The 18 item smoking media literacy scale from 2006 was internally consistent ($\alpha =$ 0.87). Primack et al. (2006) then also measured concurrent criterion validity (the extent to which the scale relates to information from other variables) by looking at associations between students' smoking media literacy scale values, smoking-related variables and covariates in the theory of reasoned action. The researchers found that smoking media literacy had a statistically significant and independent association with current smoking, susceptibility, and attitudes, but not with norms (Primack et al., 2006). A validity threat to this study was the fact that the school in which the scale was tested was homogeneous in ethnic background.

In 2009, Primack et al. used a more brief media literacy scale to measure smoking media literacy among college students, containing only six items. Similar to the previous study, the six items related to three domains; authors and audiences, messages and meanings, and representation and reality. This scale was tested among 657 students. These students were contacted by email and the response rate was 18.6%, which increases the potential for response bias. The researchers found that the six item smoking media literacy scale for college students was internally consistent ($\alpha = 0.79$). Primack et al. (2009) argue that even though the scale's strong theoretical basis contributes to its face validity, future research should more carefully assess its criterion and construct validity. In addition, the researchers argue that even though they looked at the internal consistency reliability, other types of reliability such as test-retest reliability were not assessed. In addition, one of the problems with the previously described tests is that they are based on self-assessment. As will be discussed later, it may be more valuable if an outside reviewer assesses students' level of media literacy.

Duran, Yousman, Walsh, and Longshore (2008) took what they called a holistic approach to media literacy assessment, combining qualitative and quantitative assessment. This is similar to Hobbs and Frost's (1998, 2003) approach to assessing media literacy. The qualitative section consisted of three open-ended questions about a video advertisement. Three of the four authors who wrote the research article inductively constructed coding categories. These categories were then augmented by using an existing coding system created by Lewis and Hill (1998). Three graduate students coded 35% of the student responses which led to an inter-coder agreement of 94% for question one, 93% for question two, and 94% for question three (Duran et al., 2008). The second section was a quantitative self-assessment measure consisting five-point Likert scales on two different areas; knowledge of media structures and perceptions about the influence of media. The first scale (knowledge of media structures) consisted of 24 items on five dimensions; media economic structure, media activism strategies, media advocacy groups, involvement in media activism, and media reform concerns (Duran et al., 2008). The questionnaire was taken by 294 students from a private eastern university to determine the factor structures. An oblique factor analysis produced five factors that accounted for 66% of the common variance (only factors with more than a 1.00 eigenvalue were accepted). A 0.60-0.40 criterion was used for item selection. Because of this criterion, the scale on knowledge structures was reduced to 19 items. The second scale on media influence yielded two factors (media influence on self and media influence on others) with an eigenvalue higher than 1.00.

Two researchers who also assessed general media literacy skills were Arke and Primack (2009). They developed and tested a pilot measuring general media literacy skills. Similar to Quin and McMahon (1995) and Hobbs and Frost (1998, 2003) they decided to test students independently rather than having them fill out a form of self-assessment as was done by Primack

et al. (2006, 2009). Arke and Primack (2009) based their conceptual model on specific media

literacy models. Specifically, they used parts of the definition of media literacy by Aufderheide

and Firestone (1993) who argue that someone is media literate when he or she "can decode,

evaluate, analyze, and produce both print and electronic media" (p. 9). Arke and Primack

measured three of these four components. They looked at access (decoding), analysis, and

evaluation. They also related their conceptual model to some of NAMLE's (2007) key questions

and more broadly, to Bloom's taxonomy (Bloom et al., 1956). They then created a media scale

consisting of seven measures as can be seen in Table 7.

Table 7

Arke and Primack's (2009, p. 57) Theoretical Framework and Items

Label	Domain	Item code	Item(s)	Aufderheide	NAMLE Key Questions	Bloom
A	Recall	Recall	Factual recall items	Access	Content	Knowledge
B	Purpose	Purpose	Explain the purpose of the message.	Access	Purpose	Comprehension
C	Viewpoint	Sender	Identify the sender of the message.	Analyze	Author/Audience	Analysis
		Missing	What points of view may be missing?	Analyze	Author/Audience	Analysis
D	Technique	Technique	How does the sender attract and hold your attention?	Analyze	Techniques	Analysis
E	Evaluation	Evaluation	What attitudes or feelings are you left with afterwards?	Evaluate	Credibility	Evaluation
		Inference	What does the information suggest?	Evaluate	Credibility	Synthesis

Note. From "Quantifying media literacy: Development, reliability, and validity of a new measure," by E. T. Arke and B. A. Primack, 2009, *Educational Media International, 46*(1), p. 57. Copyright 2009 by Taylor & Francis Online (www.tandfonline.com). Reprinted with permission.

The measures included open-ended questions which were evaluated and converted to

numerical scores with the use of a framework based on work by Worsnop (1996). Worsnop

previously created a scale to assess students' responses to media texts. The scale had six levels

ranging from zero to five. In order to assess media literacy in "a variety of forms" (NAMLE,

2007), the authors assessed each of the measures for each of three media types: radio, television

and print. The authors administered this pilot measure to 34 college communication students and

found that each of the three subscales (radio, television and print) were internally consistent ($\alpha 1$

$= 0.74$, $\alpha 2 = 0.79$, $\alpha 3 = 0.75$). To account for criterion validity, the media literacy scale was

correlated with a composite critical thinking measure, leading to a significant correlation ($r =$ 0.32, $p = .03$) as was expected by the authors. The authors also found that the underlying factor structure of the students' responses matched the conceptual model, which lends content validity to the scale. One of the limitations of the study was that it had a small sample size that was socio-demographically homogeneous in nature. The scale was also limited to traditional media messages and would be more complete if it included media messages from newer media such as the Internet. What also appears to be missing in all the scales that are described here is that they were never tested for test-retest reliability.

Two years later, Chang and Lui (2011) published a study on the development of a media literacy self-assessment scale (MLSS). Initially, six experts specialized in information and communication technology education commented on the validity of the scale (Chang & Lui, 2011). In addition, 15 students clarified the wording of the individual items. The MLSS consists of three subscales with five-point agree/disagree Likert scale statements. The first subscale relates to media application skills. This subscale assesses students' abilities to use technologies. An example of an item in this subscale is: "I can use different media technologies to store/backup the content" (Chang & Lui, 2011, p. 606). This subscale seems in line with general conceptual models of media literacy as basic access and using skills that are often mentioned by media literacy scholars and organizations (i.e., ACMA, 2009; CML, 2008; EC, 2009; Livingstone et al., 2008; NAMLE, 2007; Ofcom, 2008). The second subscale is about learning with media, in which students' abilities to use media messages to achieve learning outcomes are assessed. Interestingly, this subset of skills is generally not mentioned by main media literacy scholars and organizations. The third subset is attitudes toward media. In this subset students' perceptions regarding copyright ethics of technologies are assessed (Chang & Lui, 2011). Even

though this is a skill that is often regarded as an important part of being able to critically evaluate and use media messages, it appears a rather specific skill to address. Because of the appearing lack of alignment with current media literacy literature, the content validity of the scale appears weak. Regardless, the researchers did make an attempt to test the scale for other validity threats. 1539 fifth and sixth grade Taiwanese students completed the survey. According to the researchers, these students came from divergent socio-demographic backgrounds. The researchers conducted an exploratory factor analysis and principal component analysis with varimax rotation to clarify whether the three factors were valid tests of the constructs. They found that the eigenvalues of all three factors were larger than one. The researchers only kept items if the factor loading was higher than 0.50. As a result, the initial 23 item scale was reduced to 18 items. The overall Cronbach's alpha reliability for the scale was 0.93. Cronbach's alphas that measured the internal consistency of the three measures were respectively $\alpha 1 = 084$, $\alpha 2 = 0.79$, and $\alpha 3 = 0.80$.

Inan and Temur (2012) have recently also created an assessment instrument to examine media literacy levels of prospective teachers. They created a pool of 65 media literacy questions based on literature about media literacy. After an expert review, seven questions were eliminated, which lead to a survey of 58 questions. This survey was then applied to 80 prospective teachers, leading to four sections composed of 53 questions. The overall Cronbach's alpha was 0.85. Exploratory factor analyses showed that there were four factors with an eigenvalue over 1.00. The survey was then tested among 480 prospective teachers. The authors did not directly describe the four dimensions that they analyzed. However, several components that the researchers looked at were; having a critical response/approach (measured by items such as sending a letter to the television station), first reactions to seeing disturbed scenes, last

reactions when seeing disturbed scenes on television, media production levels, and media monitoring habits (time spent watching television and reading (different) newspapers). These authors see someone as media literacy if they change channels when viewing something disturbing and when they send a protest letter to the television station. This seems in line with a more protectionist approach to media literacy. Similar to Chang and Lui's (2011) assessment instrument, Inan and Temur's (2012) survey was a self-assessment survey.

An organization that recently also attempted to create a self-assessment instrument to measure media literacy is EAVI (2010, 2011), partnering with other organizations and universities. The tool was created to measure the levels of media literacy across countries in the European Union. EAVI looked at both individual competences (use of skills, critical understanding, and communicative abilities) and environmental factors (such as information availability and media policy). The questions in the survey were developed using established survey measures such as measures from Eurostat (2009). Questions obtained from these measures were matched against criteria and components of the media literacy framework that EAVI had created (this framework was shortly described in the section on media literacy skills and outcomes of this literature review) and was expanded with additional survey questions that addressed gaps. The survey was then analyzed by a number of media literacy experts. According to EAVI (2011), this further narrowed the questionnaire and led to an 82 item questionnaire. The questionnaire was structured in 15 blocks covering each of the three individual competence areas, eight associated components, as well as citizen participation. The survey was then tested online with 7,051 participants from seven countries. In addition, 252 phone surveys were conducted. Based on the results, several factor analyses and standard scale reliability tests were conducted to measure the internal consistency of the different constructs. In some cases, these

tests failed to prove that certain subsets were expressions of the same underlying concepts. In other cases, some constructs passed factor analyses, but the composite factor failed a standard scale reliability test of unidimensionality. This means that even though a cluster of questions tend to load together, they may not actually measure one concept. This means that the assessment instrument needs to be developed further before it can reliably measure what it is supposed to measure. In addition, expert reviews were used for some parts of the assessment. One or more experts in each country were asked to address media policy and media education in their countries. Even though this was a creative way to assess these attributes, they pose a serious risk to validity for cross-national comparison because of the subjectivity of the experts (EAVI, 2010).

Media Literacy Assessment in Educational Systems

Even though media literacy can be measured in research studies using scales, surveys, or other assessment instruments, this is not the only way that media literacy is assessed. Media literacy has been assessed using other methods as well in educational systems across the globe. In many different countries, media literacy education has been integrated in the curriculum or taught as a separate subject in formal school systems. While it is taught in many different school systems across the world, it is only a substantial and assessed part of the school system in a few countries (Buckingham & Domaille, 2009). Ways that media literacy is assessed in educational systems across the world will therefore be described next.

New Zealand is one of the few countries in the world in which media literacy is both implemented and assessed on a national basis. According to Lealand (2009), the establishment of media literacy education on a national basis depends on a receptive framework that usually includes the existence of a national curriculum and ways to moderate educational programs. This

is the case in New Zealand where the National Certificate of Educational Achievement (NCEA) is the main qualification for high school students (New Zealand Qualification Authority, n.d.). During high school, students can choose to study Media Studies for three years, divided in three levels, which is taken by thousands of students a year (Lealand, 2009). There are both unit (competency based) standards and achievement (New Zealand curriculum based) standards for the Media Studies subject. These standards are externally assessed in exams but also assessed internally. Teachers in New Zealand maintain strong control over the curriculum and assessment of Media Studies in New Zealand and often provide guidelines and exemplars for internally assessed work (Lealand, 2009).

In addition to New Zealand, the United Kingdom (UK) is another rare location where media literacy is taught and assessed on a national level. In the UK, Media Studies is offered as part of the General Certificate of Education Advanced Level (A-levels). In 2011/2012 62,000 students in the UK took Media Studies related subjects (British Film Institute, 2013). Even though Media Studies qualifications are offered everywhere in the UK, the UK has several different examination boards who each offer A-level courses. In England, Wales, and Northern Ireland, Media Studies is offered through three different examination boards and in Scotland it is offered through one examination board. Each of the examination boards developed slightly different specifications and standards (P. Fraser, personal communication, October 23, 2013). Overall, Media Studies is assessed both internally through coursework (such as production work) and externally through essay-based exams. Specifications have been developed with detailed assessment criteria.

In a few countries, media literacy is integrated on a state or province-wide basis, such as in in the United States, Canada, and Australia. In these countries there are wide differences to the

extent media literacy is part of the curriculum and to the extent it is assessed. According to

Media Smarts (2013), which is Canada's center for digital and media literacy, Ontario was the

first province to mandate media literacy in the curriculum. In Ontario, Canada, media literacy is

one of the four strands in the language curriculum and students receive a separate grade for

media literacy on their report cards from the first through eighth grade (Ontario Ministry of

Education, 2006). However, media literacy is not taught in all Canadian provinces and territories

or at all levels (Media Smarts, n.d.). In addition the quality and practice are not the same in each

province (Media Smarts, n.d.).

In Australia, media literacy is also integrated on a state-side basis. According to Brereton

(2001), Australia is possibly the most developed when it comes to media literacy education.

Most Australian states offer media studies as part of secondary education, though it is usually

assessed differently in each state. For example, in the state Victoria, the subject media is assessed

both internally and externally. For the first two units in media, assessment is determined by the

individual schools and not reported to the Victoria Curriculum and Assessment Authority

(VCAA, 2011). For the last two units, however, the VCAA (2011) oversees the assessments of

all students. Student achievement is determined by internal school-assessed coursework and

tasks and an external final examination. While teachers still have freedom to design the

assessments for the coursework and task(s), they do have to assess specific predetermined

outcomes and use specific assessment criteria that have been defined by the VCAA. They are

fairly free to choose how they assess these outcomes, however, as long as they use at least one of

the following assessment methods for assessing student tasks: a written report, an essay, short

responses, structured questions, an annotated visual report, or an oral report (VCAA, 2011).

However, the final end-of-year examination is developed by the VCAA and is the same for any

media students in Victoria. Conversely, in the state Queensland, student achievement of the subject Film, Television, and New Media is only assessed by school-based assessments (Queensland Studies Authority, 2007). There are no external examinations in Queensland. Schools can select from a wide range of assessment techniques to assess students' design work (such as storyboards, film scripts, and website screen shots), products (such as videos, animations, soundtracks, or advertisements), and critiques (such as analytical essays, reports, interviews, or director's commentary) (Queensland Studies Authority, 2007). Different states therefore assess these secondary media classes differently, using either internal or external assessments, or a combination of both. In addition, a new national Australian curriculum will be implemented soon, which "will make it mandatory for all students from pre-school to year eight to have achievement reported against Media Arts standards" (Dezuanni, n.d., para 7).

The European Media Literacy Education Study (EMEDUS, 2014) recently published the drafts of 26 reports on formal media literacy education for 26 European countries. EMEDUS is a consortium consisting of media literacy organizations and experts in Europe, the United Nations (UN), and UNESCO. In addition to providing general information about media literacy education in each of the 26 countries, EMEDUS (2014) also described how media literacy is assessed in each of these countries. According to EMEDUS (2014), media literacy is integrated into different subject areas in a cross-curricular way in most countries, rather than treated as a separate subject. Examples of countries that have integrated media literacy in a cross-curricular way are: Austria, Belgium, Bulgaria, Czech Republic, Estonia, France, Finland, Germany, Hungary, Ireland, Italy, Latvia, Luxemburg, Malta, the Netherlands, Poland, Portugal, Slovenia, Slovakia, Spain, and Sweden (EMEDUS, 2014). While some countries, such as Bulgaria, Slovenia and Slovakia, treat media literacy as a compulsory cross-disciplinary subject, other

countries, such as France and Sweden, only very loosely refer to media literacy in their

curriculum (EMEDUS, 2014). Interestingly, while many countries teach media literacy in a

cross-curricular way, media literacy outcomes are not assessed at all in most of these countries.

Exceptions are a few countries in which media literacy skills are loosely assessed, such as Italy,

Malta, and Slovakia. Even though media literacy is not assessed at all in most countries, many

countries do assess ICT skills. Only two countries treat media literacy education as a separate

subject. These countries are Romania, in which Mass Media is a subject that is part of the

optional curriculum, and the United Kingdom, as was described earlier (EMEDUS, 2014).

However, media literacy assessment does not seem to exist at the official level in Romania

(EMEDUS, 2014). Overall, it therefore seems that media literacy goals are included in most

curriculum documents of the 26 studied European countries, but that these goals are in most

cases not officially assessed. This is in line with earlier observations of Buckingham and

Domaille (2009).

Issues and Challenges Regarding Media Literacy Assessment

Based on the prior descriptions of media assessment, it can be concluded that media

literacy is only assessed in a few countries. In addition, research on media literacy assessment is

still rather anecdotal rather than systematic. Moreover, researchers have taken many different

approaches towards measuring media literacy, but there is not much information available on the

reliability and validity of these assessment instruments. According to Livingstone and Thumim

(2003), there is a lack of consensus over the appropriate methods to measure media literacy.

Fastrez (2009) claims that media literacy assessment is "still in its infancy" (p. 3) and "lacks

systematic efforts to make it a coherent endeavor" (p. 3). This seems reflected by the variety of

ways media literacy assessment has been described in the previous sections and the lack of

implementation of media literacy assessment in many countries. Livingstone and Thumim (2003) state that different emphases in research agendas, different methodologies and samples make it difficult to draw comparisons. Effectiveness of media literacy education in research is generally assessed in more quantitative and controlled settings by scholars who take a more protectionist approach while media literacy is assessed in more qualitative ways in authentic settings by scholars from a cultural studies approach (Martens, 2010). Interestingly, the more defensive approach still largely dominates the research agenda (Martens, 2010). According to Buckingham and Domaille (2009), this is especially the case in countries in which media literacy education is less well-established.

When looking at the current instruments that are used to measure media literacy, it appears that a lot of work needs to be done and that media literacy instruments are still in their infancy. The first instruments have started to appear in the 1990s (Quin & McMahon, 1995; Worsnop, 1996; Wulff, 1997) and similar to the instruments that have created more recently, they still have to be tested more for validity and reliability (Primack et al. 2006; Primack et al., 2009). Possible disadvantages with self-assessment have also not been addressed yet. Even though researchers like Chang and Lui (2011) and Inan and Temur (2012) claim that their instruments have an adequate validity and reliability in respectively assessing elementary school students' and prospective teachers' perceptions of media literacy, and even though self-assessment seems a common way of assessing media literacy as it was also used by Primack et al. (2006, 2009) and EAVI (2010, 2011), self-assessment has some disadvantages. Self-assessment is often not regarded as a valid measure for the possession of skills for a few reasons. Dunning, Heath, and Suls (2004) argue that the correlation between self-ratings of skill and actual performance is moderate to small in many domains. They argue that people generally tend

to overrate themselves, claiming that they are above average in a skill. In addition, people tend to overestimate the likelihood that they will engage in desirable behaviors and achieve favorable outcomes (Dunning, Heath, & Suls, 2004).

Martens (2010) argues that "researchers should urgently develop more valid and reliable research instruments to aptly capture media learning outcomes" (p. 15). He also argues that researchers looking at assessment should look at whether the skills learned in class also transfer to new situations. He doubts that many of the results of experimental research generalize to everyday media use. Martens (2010) also believes that more research needs to be done to capture the long-term influence of media literacy education. Most of the developers of the media literacy assessment instruments described earlier in this document have only attempted to measure short-term effects of media literacy education. Furthermore, none of researchers creating the current media literacy scales have actually looked at test-retest validity. Whether the same test could be used again to measure media literacy levels of the same group of students is therefore unknown.

Bergsma and Carney (2008) suggest that media literacy professionals and scholars "should be more explicit about the media literacy core concepts/skills they include in their interventions, and should more carefully address who delivered the intervention with what fidelity, in what setting, for how long and utilizing what pedagogical approach" (p. 522). Similarly, Christ (2004) claims that the term media literacy should be clearly defined and that standards and competencies need to be developed to measure media literacy outcomes. He states that most higher education faculty would claim that they teach media literacy. However, they may not be able to express what they mean with media literacy and much less be able to assess it as a learning outcome (Christ, 2004).

Correspondingly, Zacchetti (2011), who is working for the European Commission, claims that different European member countries show different levels and practices of media literacy and that media literacy standards or criteria to assess media literacy are lacking. Similarly, EAVI (2010, 2011), who developed a media literacy assessment instrument together with other organizations, claims that refining the criteria or indicators of media literacy is challenging as media literacy relates to many different contexts, actions, and influences. They therefore state that their 20 minute survey alone cannot provide a comprehensive assessment of media literacy and that other approaches are needed.

Buckingham and Domaille (2009) claim that many countries in the world require media literacy to be taught in language arts or social studies. However, even though it is required to be taught, there is often a lack of any clearly assessed activities measuring student learning in terms of skills and competencies (Buckingham & Domaille, 2009). Luckily, some organizations such as the Association for Media Literacy in Canada and the British Film Institute in England have developed media literacy frameworks and a few countries have developed clear specifications of media literacy skills and competencies for in their curricula (Buckingham & Domaille, 2009). Respondents of Buckingham and Domaille's (2009) international survey conducted for UNESCO indicated that media education is often included in curriculum documents but that it is not assessed by itself (or assessed at all). The study by Evans et al. (2006), which used fruit and vegetable intake as a measure of media literacy is an example of that. In some countries, such as Chile, it was suggested in curriculum documents that students should "develop a critical awareness and actively participate in creating media texts with a clear message" (Buckingham & Domaille, 2009, p. 25). However, there were no assessment criteria for these skills. Interestingly, some of their respondents seemed to like the freedom and flexibility that came with this. Overall,

however, Buckingham and Domaille (2009) claim that that the lack of structured assessment procedures likely contributed to the lack of status of media literacy education. They claim that the field has continuously struggled for its recognition as it has mainly been included within assessment of other subject areas. They claim that assessment of media literacy education should be prioritized as it impacts classroom practice more than any curriculum document. Another issue with media literacy assessment that Buckingham and Domaille (2009) mention is that media literacy assessment often favors written media over other forms of media.

In the Netherlands, a group of experts and media literacy related organizations developed a competence model consisting of 10 competences Dutch that people need to participate actively and thoughtfully in a mediated society (Mediawijzer.net, 2012; Schwarz et al., 2011). According to Schwarz et al. (2011), media literacy is so incredibly complex that it makes it practically impossible to develop one instrument that could assess all aspects of media literacy and all target groups. They therefore suggest developing assessments for specific components of media literacy and specific target groups. Whether it is possible measure media literacy as a whole independent of context (e.g. Arke & Primack, 2009; EAVI, 2010, 2011) or whether it is better to measure only certain elements of media literacy related to specific contexts (e.g. Austin & Johnson, 1995; Hobbs & Frost, 1998, 2003; Irving and Berel, 2001; Kusel, 1999; Pinkleton et al., 2007; Vraga et al., 2009) appears an issue that media literacy scholars and professionals have not yet agreed on.

Scheibe and Rogow (2011) mention some challenges related to media literacy assessment as well. They state that assessment would be easier if media literacy education was about teaching discrete facts. They claim it is much harder to assess the process of asking questions and reflecting on production choices in which a variety of responses is the norm (Scheibe &

Rogow, 2011). Assessment instruments therefore appear hard to develop. Another challenge that Scheibe and Rogow (2011) mention is that media literacy is embedded in many different subject areas, which makes a uniform set of assessment instruments almost impossible. Interestingly, most of the empirical media literacy assessment instruments are quantitative and objectivist in nature, often avoiding complexity of skills and the constructivist nature of media literacy mentioned by Scheibe and Rogow (2011) and many other media literacy scholars who would argue that media literacy is moving to a more constructivist approach (see: Buckingham, 2003; Hobbs & Jensen, 2009; Masterman, 1985; Scheibe & Rogow, 2011; Tyner, 1998).

Overall, the assessment of media literacy seems to come with many challenges. Martens (2010) therefore seems to rightfully state that evaluating and explaining the effectiveness of media literacy education is one of the most overwhelming challenges for current research in the field.

Chapter 3 – Methodology

Purpose and Research Questions

As previously stated, the purpose of this study on media literacy assessment was to explore the views of media literacy scholars and professionals regarding media literacy assessment with the intent of using this information to develop a quantitative survey to validate and extend the qualitative findings with a larger sample. An exploratory sequential design was used to conduct this study. The first phase of the study was a qualitative exploration of media literacy outcomes, assessment practices, existing challenges, and possible solutions to these challenges. In this phase, interview data was collected from a purposeful sample of 10 media literacy scholars and professionals. From this initial exploration, the qualitative findings were used to develop measures that were subsequently administered to a larger sample. In the quantitative phase, survey data were collected from a sample of media literacy professionals and scholars ($N = 171$) from all around the world to validate and extend the qualitative findings. Since the aim of this study was to both *explore* media literacy assessment and to *validate* and *extend* findings with a larger sample, mixed method data collection methods were chosen. According to Creswell (2009), a mixed methods approach could provide a more expanded understanding of a research problem. This study was designed to answer the following four research questions:

1. What outcomes do media literacy professionals and scholars identify as important?

2. How do media literacy professionals and scholars assess these outcomes?

3. Which challenges do media literacy professionals and scholars identify regarding media literacy assessment?

4.   What recommendations do media literacy professionals and scholars make to overcome the challenges of assessment?

Research Design

This study employed a mixed methods approach, combining both qualitative and quantitative approaches in the methodology of the study (Tashakkori & Teddlie, 1998). A mixed methods approach does not only combine methodologies, it also combines a philosophy and research design orientation. As Creswell and Plano Clark (2011) state, both qualitative and quantitative data is collected and analyzed in a mixed methods approach. They further claim that these two forms of data are mixed either concurrently (by combining or merging them), sequentially (by having one build on the other), or by embedding one within the other. In a mixed method study, these procedures are framed within philosophical worldviews and theoretical lenses and combined into specific research designs (Creswell & Plano Clark, 2011). "Its central premise is that the use of quantitative and qualitative approaches, in combination, provides a better understanding of research problems than either approach alone" (Creswell & Plano Clark, 2007, p. 5).

Exploratory sequential approach. For this study, an exploratory sequential approach was used. Using this design, qualitative data was collected and analyzed first (Creswell, 2009). This was followed by the collection and analysis of quantitative data in the second phase, building on the results of the first qualitative phase (Creswell, 2009). According to Fraenkel and Wallen (2012), "results of the qualitative phase give direction to the quantitative method, and quantitative results are used to validate or extend the qualitative findings" (p. 560).

In this exploratory sequential approach, a comprehensive understanding of media literacy assessment practices, the existing challenges, and possible solutions to these challenges was

obtained by first gathering qualitative data from 10 media literacy professionals and scholars

regarding this topic, followed by a descriptive view on this topic from data collected from a

larger quantitative sample ($N = 171$). The research design was sequential because qualitative data

was collected and analyzed first, followed by the collection and analysis of quantitative data. The

quantitative data built on the qualitative data as can be seen in Figure 2.
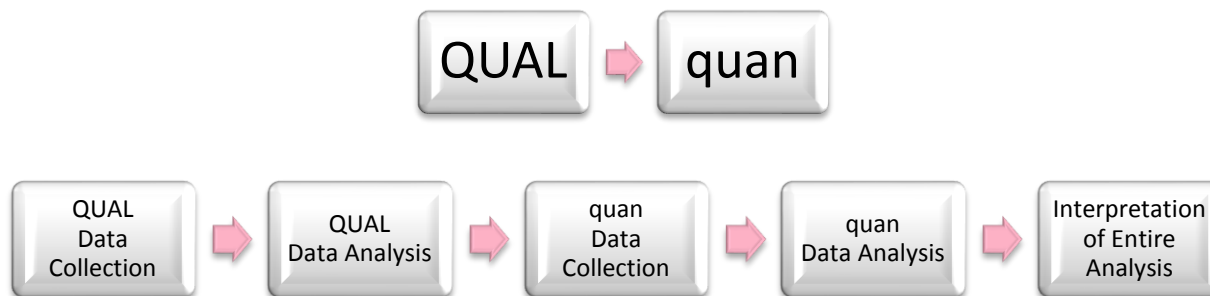
Figure 2. An exploratory sequential design (Creswell, 2009)

Philosophical foundations for using mixed methods research. As written earlier, a

mixed methods approach combines philosophical foundations. Since a research study begins

qualitatively in a sequential exploratory design, the research problem and purpose often call for a

greater significance of the qualitative strand in the design (Creswell & Plano Clark, 2011). The

first qualitative phase of the study worked from a constructivist worldview through which

understandings or meanings are formed through the subjective views of participants (Creswell,

2009; Creswell & Plano Clark, 2011). In the quantitative phase of the research, the worldview

shifted to a postpositivist philosophy by identifying and describing variables quantitatively.

Multiple worldviews were therefore utilized in this study, shifting from a constructivist

worldview to a postpositivist worldview when shifting from qualitative data to quantitative data.

Phase I: Qualitative Interviews

   Participants. According to Patton (2002), qualitative studies typically focus in depth on a relatively small sample that is selected purposefully. Patton (2002) stated that "the logic and power of purposive sampling lie in selecting information rich cases for study in depth" (p. 230). For this reason, information rich cases were selected for the qualitative interviews. The specific strategy used to select participants was a combination of extreme case sampling, by selecting information-rich cases with much knowledge on the topic, and maximum variation sampling, by selecting media literacy scholars and professionals from a wide variety of geographical locations and backgrounds. A total of 10 media literacy scholars and professionals were included in the sample. Initially, a list was made of 20 media literacy professionals and scholars who either developed media literacy assessment instruments, hold a leadership position in the field, or have many years of experience teaching or doing research in the field. Initially, 10 media literacy professionals and scholars were contacted. When they did not respond within a week, more media literacy professionals and scholars on the list were contacted until 10 participants indicated their willingness to participate. A total of 16 participants were contacted before 10 media literacy scholars and professionals agreed to participate in the study.

   Because some of the information disclosed in the interviews could be somewhat sensitive (such as weaknesses in their assessment instruments), pseudonyms were used instead of interviewees' real names. The interviewees represented a wide range of geographical locations so a global understanding of media literacy assessment practices could be established. The sample consisted of participants from the United States, Australia, Canada, United Kingdom, Belgium, and Hong Kong. Seven interviewees taught media literacy and conducted research about it as well. One interviewee is the president of a large media literacy organization, one has

mainly been involved in the field as a researcher, and one interviewee has mainly been involved in the field as a teacher. In their teaching or research, five interviewees are or have been involved with university level students. All interviewees have been involved with media literacy education of K-12 students. Six interviewees worked with elementary school students, three interviewees worked with middle school children students, and six interviewees worked with high school students. In addition, one of the interviewees worked with pre-school students. Four interviewees have been involved in the field as teacher trainers also while two interviewees have worked on examination boards related to media literacy assessment. In addition, eight interviewees have taught or conducted research about media literacy as a distinct subject area. In their work, most of them covered a variety of topics and media forms. However, one of the interviewees mainly conducted research regarding gender and violence and another interviewee did a considerable amount of work specifically related to film. Two of them also integrated media literacy in specific subject areas, such as language arts.

Instrument. A semi-structured interview protocol was developed in order to explore the views of media literacy scholars and professionals on media literacy assessment. Semi-structured interviews are guided by a set of questions, even though the interviews also allow for probing, rephrasing, and asking the questions in a different sequence (Russ-Eft & Preskill, 2009). Using this instrument, the interviewees were asked about media literacy outcomes, assessment practices, existing challenges, and recommendations to overcome these challenges. The interview questions related directly to the four research questions.

Expert reviews. After the Institutional Review Board (IRB) application was approved for this phase of the study (see Appendix A), the interview protocol was reviewed by three expert reviewers to enhance its validity. In September of 2013, the expert reviewers were asked

to sign an online IRB consent form prior to serving as an expert reviewer. The consent form can be found in Appendix B. The team of expert reviewers consisted of three media literacy scholars and professionals. The first expert reviewer is a retired professor from Sweden who has conducted extensive work in Sweden as well as in the United States on visual literacy. The second expert reviewer is from the United States and is the co-coordinator of a media literacy graduate program. The third expert reviewer is originally from Australia, though he has lived in the United States for many years. He is a retired professor and wrote many books and articles about media literacy and also coordinated a media literacy program in the United States. The expert reviewers examined the interview protocol based on its clarity and alignment with the research questions, using a rubric that can be found in Appendix C. They were also given the opportunity for open written feedback in the rubric. The written feedback was followed up with a Skype interview for clarification and detailed feedback, lasting between twenty and thirty minutes.

Expert reviewers' feedback on the qualitative interview protocol. Based on the three expert reviews, several changes were made to the interview protocol and research questions. The revised semi-structured interview protocol can be found in Appendix D.

Based on the advice of the first expert reviewer, several changes were made to the interview protocol itself. Several sentences were rephrased and the introduction in which the study is described to the interviewee was shortened and written in a less formal manner. In addition, certain interview questions were slightly rephrased. For example "What should be the outcomes of media literacy education?" was replaced by "What are the outcomes of media literacy education?"

Based on the second expert review, several changes were made to the interview questions and research questions. For example, the word 'problems' was removed from the interview questions to avoid bias. Instead, the word 'challenges' was used. In addition, the first interview question was revised from "How long have you been teaching or researching media literacy?" to "How did you become interested in teaching or researching media literacy?" This new question would not only elicit information about how long the interviewee may have been teaching or researching media literacy, but more importantly, it would also elicit information about how the interviewee entered the field and which background and interests he or she has. In addition, the order of several interview questions was altered. For example, question 6b was switched by question 6. This means that interviewees were first asked how they personally resolved any challenges before being asked how they think these challenges can be overcome. By this change, information about personal solutions may be obtained first, before moving the conversation into a discussion of recommendations overall. Furthermore, when an interviewee would state that he or she did not encounter any challenges regarding media literacy assessment, the expert reviewer recommended asking the interviewee what their assessment experience was like, as their response may offer insights regarding overcoming any challenges. Moreover, the wording of several research questions was adjusted to align better with the type of research design used to answer these questions. For example, "Which challenges do media literacy professionals and scholars *experience* regarding media literacy assessment?" was replaced by "Which challenges to media literacy professionals and scholars *identify* regarding media literacy assessment?" Learning which challenges they experience may require extensive observations, rather than interviews.

Based on the third expert review, one interview question was altered and one interview question was removed. The question "What role does assessment play in your work on media literacy?" was removed as the expert reviewer believed that this question would be answered in the subsequent question. Another reason for removing this question was the limited time allotted for the interviews. Removing the question would allow for better use of the time. In addition, the expert reviewer stated that views on assessment may differ based on the context in which the interviewee teaches or does research. To learn about the context in which the interviewee teaches or does research, the question "What topics do you cover in your classes or research on media literacy" was replaced by "What grade level and subject areas you focus on in your teaching or research on media literacy?"

Data collection. After the revisions of the interview protocol were completed, participants of the study were sent an email. This email included a brief description of the study and an invitation to participate in the study. After showing interest in the study, the participants were asked to sign an online IRB consent form prior to the interview. The interview consent form can be found in Appendix E. Interviews were held over a five week period in October and November. The interviews were conducted online, using Skype, an online audio and video conferencing software application. Each of the interviews was recorded using the Amolto Call Recorder for Skype. Each of the interviewees was interviewed for approximately 60 minutes, using the semi-structured interview protocol described earlier. An audit trail of all study procedures was be maintained. Moreover, field notes were written during the interview process.

Data analysis. The qualitative interview data were transcribed in November, 2013, using the Olympus AS-2400 Transcription Kit. The transcripts were typed into Microsoft Word. After the interviews were transcribed, they were sent back to the interviewees to provide them with the

possibility of member checking their transcript. Five interviewees provided minor corrections. Subsequently, each interview was analyzed. The purpose of analyzing data was to bring order, meaning, and structure to the data (Anfara, Brown, & Mangione, 2002).

Each of the transcripts was coded two times. In the first iteration, the transcripts were coded by the interviewer using Microsoft Word. According to Emerson, Fretz, and Shaw (1995), a code is "a word or short phrase that captures and signals what is going on in a piece of data in a way that links it to some more general analysis issue" (p. 146). During the coding process, categories and themes were identified. Rossman and Rallis (2012) see a category as a phrase or a word that describes a relative discrete section of the data, while they view a theme as a phrase or sentence that describes linkages, patterns, processes, and explanations within and across categories. The identification of themes was mainly achieved during the second iteration of coding. The second iteration of coding was conducted using NVivo software.

Validity and reliability. The validity of the semi-structured interview protocol was enhanced by expert reviews of the protocol provided by three media literacy professionals and scholars. These expert reviewers provided input on the clarity of the interview questions and the alignment of the interview questions with the research questions. Based on this input, the research questions, interview protocol, and interview questions were revised. In addition, the credibility of the qualitative interviews was ensured by member checking. Emerging findings were taken back to the participants for them to elaborate, correct, extend, or argue about (Rossman & Rallis, 2012). In addition, an audit trail was kept to keep track of all decisions and actions that were performed during the study.

Reflexivity: Researcher's resources and skills. In qualitative research, researchers take an active role as they construct understandings of their topic by the questions they choose to ask,

the contexts they choose to study, and their personal resources, skills, and backgrounds (Rossman & Rallis, 2012). The knowledge that is constructed during the qualitative phase of the study is therefore interpretive or constructivist in nature. The researcher is not neutral, but an active agent in this research process. For that reason, the researcher should be aware of the self, the other, and the interplay between the two, which Rossman and Rallis (2012) refer to with the term reflexivity. It is therefore crucial to be aware of your own perspective. I will therefore describe my own history and dispositions towards media literacy.

During the time of the second war between Lebanon and Israel, I came to Israel to study Political Communication at the Hebrew University of Jerusalem. My flight stopped in Cyprus to switch crews, after Hezbollah declared in the media that they would bomb Tel Aviv that night. While first letting these words scare me, I calmed down quickly when I saw nothing but blue sky and palm trees in Tel Aviv. As it turned out, Tel Aviv was not bombed and the city appeared completely peaceful. It was then that I started to understand how media can frame the images we have of the world. In Israel, I learned about politicians' use of media and the influence of media reporting on political decisions. Fascinated by this phenomenon, I wrote a bachelor's thesis on the characterization of the Palestinian-Israeli conflict by the mass media. I realized then that many people do not critically evaluate world media messages, such as those presented about the Palestinian-Israeli conflict. It was also then that I realized my interest in media literacy. I have since come to believe in the importance of teaching children to responsibly use and critically analyze the messages conveyed by the mass media. During these years, I was mainly exposed to theoretical frameworks stemming from communication theory towards media literacy, focusing mainly on semiotics and cultural studies.

I next entered the graduate certificate program in Media Literacy at Appalachian State University (ASU) to learn more about media literacy. After I finished the program, I taught media literacy at ASU. The REICH College of Education in which I taught is strongly influenced by a social-constructivist framework, informed by theories of Vygotsky (1978), Berger and Luckmann (1966), Kegan (1992) and others (Appalachian State University, 2013). This framework has strongly influenced my thinking and views towards teaching.

 Subsequently, I entered the Instructional Design and Technology program at Virginia Tech, which provided me with a better view on how learning occurs and how to design instruction to maximize student learning. This program provided me with a systematic way of viewing the instructional design process. It was at Virginia Tech that my interest in assessment of media literacy was cultivated.

Because of these experiences, I have certain views towards media literacy. I believe that media literacy education should prepare people to think critically about media messages and not to accept anything they read, hear, or see. Critical thinking, in my view, is one of the main components that encompasses being media literate. This implicitly implies that the learner should not be restricted or controlled in their views towards media. I therefore do not think that people should be protected from the media or only be taught one "right" way of seeing, hearing, or reading. Because of my studies at Virginia Tech, I also believe that media literacy assessment should be aligned directly with the skills that are taught. Generally, these are higher order thinking skills that in my view may require context-specific and authentic assessments, rather than self-assessment surveys. I understand that not all media literacy scholars and professionals hold similar views regarding how media literacy should be taught and assessed, however. I therefore attempted to remain unbiased and neutral when selecting participants for the study,

when interviewing them, and when analyzing their data. I strived not to pass any judgments related to anything that the participants disclosed to me. I made every effort to not condemn any views that they offered on media literacy education and assessment. I strived to value all perspectives that were provided, not just the ones that aligned with my own lens.

Phase II: Quantitative Surveys

    Participants. Survey respondents were selected through purposive sampling, as the entire population is not known. Maximum variation sampling was used in addition to snowball sampling. This led to a diverse sample of respondents (N =171) representing 37 countries in five continents. The characteristics of the sample will be explained in more depth in Chapter 5.

    After IRB approval for this phase of the study (see Appendix A), media literacy organizations, scholars, and professionals from a wide variety of geographical locations and backgrounds were contacted to participate in the survey. Directors and presidents from media literacy organizations were asked whether they would be interested in distributing the survey among their members. Many organizations agreed to post a link and description of the survey on their website or social media site, or agreed to distribute it through their mailing list. Among these organizations are NAMLE (United States), Media Education Foundation (United States), Media Literacy Project (United States), the Media Education Association (United Kingdom), Australian Teachers of Media (Australia), The National Association of Media Educators (New Zealand), MEDEAnet (Europe), EMEDUS (Europe), Mediawijzer.net (Netherlands), and the Finnish Society on Media Education (Finland). In addition, snowball sampling was used as respondents were asked to provide contact information of other media literacy professionals and scholars in their country.

Instrument development. The survey instrument was developed after the analysis of the qualitative data. The purpose of the quantitative survey was to validate and extend the qualitative findings. Based on the codes and categories identified during the qualitative phase, survey questions were developed. These survey questions were also guided by the four research questions of this study and the literature on media literacy assessment. For example, during the interviews, media literacy goals and outcomes were identified by the interviewees. Therefore, a list of media literacy goals and outcomes was developed for the survey based on interviewees' answers and the literature on that topic. Subsequently, survey respondents were asked to what extent these goals and outcomes are important to them. In addition, some survey questions were developed to better comprehend certain topics. For example, some interviewees differed in their views on the importance of assessing the learning process compared to the learning product. To better understand the views of media literacy scholars and professionals on this topic, respondents were asked to what extent they assess the learning process in relationship to the product. A similar question was asked about the importance of assessing media literacy as a whole or assessing it in context.

Interviewees also identified several different ways of evaluating or interpreting students' responses. In order to validate and extend these qualitative findings, survey respondents were asked to identify which of these evaluation and interpretation methods they have used in their own work. Moreover, interviewees mentioned numerous challenges they encountered in their work related to media literacy. Consequently, survey respondents were given a list of challenges that were identified by the interviewees. In order to validate and extend the qualitative findings, survey respondents were asked whether they encountered any of these challenges and to what extent they believe these challenges are important to the field. The survey respondents were also

given a list of assessment recommendations that the interviewees identified. Respondents were asked to what extent they agreed that these recommendations would improve the effectiveness of media literacy assessment.

Instrument. The survey (see Appendix F) was developed using Qualtrics and consisted of 26 questions including both open-ended and closed-ended questions. Depending on respondents' answers to specific questions, respondents would get certain follow-up questions. For example, when respondents indicated that they do not specify outcomes, they were prompted with another question asking about their reasons for not specifying outcomes. This meant that most respondents did not have to answer all 26 questions.

The survey consisted of eight pages. The first page consisted of a description of the study and consent information. On the second page respondents were asked about their demographic information. The third page was about media literacy goals and outcomes and the fourth and fifth page were about media literacy assessment. On the sixth page respondents were asked about assessment challenges and on the seventh page they were asked about assessment recommendations. Respondents were asked to provide contact information of other media literacy professionals, scholars, and organizations on the eighth and final page. In the survey, respondents were asked about media literacy goals and outcomes, media literacy assessment methods and interpretation, media literacy challenges, and recommendations to overcome these challenges. In addition to these questions, the survey also contained demographic questions. Media literacy scholars and professionals were asked about their geographical location, in which ways and for how many years they are involved with media literacy education, the context in which they apply media literacy (such as elementary schools, middle schools, high schools, or

out of school contexts), and whether they embed media literacy education and assessment within a certain subject area or rather teach it as a separate subject area.

Expert reviews. To further enhance the validity of the survey, the survey was sent to three expert reviewers. These were the same expert reviewers that reviewed the qualitative interview protocol. The expert reviewers were asked again to sign an online IRB consent form prior to serving as an expert reviewer for this phase of the study. The consent form can be found in Appendix G. These expert reviewers provided input regarding the clarity of the survey and the alignment with the research questions, using a rubric that can be found in Appendix H. They were also given the opportunity for open written feedback in the rubric. The written feedback was followed up with a Skype interview for clarification and detailed feedback, lasting between twenty and thirty minutes. Based on the input of the expert reviewers, the survey was revised.

Expert reviewers' feedback on the quantitative survey protocol. Based on the three expert reviews, several changes were made to the survey protocol and research questions. Based on the advice of first expert reviewer, a back button was added to the survey so respondents could go back and edit their answers on previous questions. In addition, the time set for the survey was changed from 15 minutes to 20 to 30 minutes, which was also something noted by the other two expert reviewers. Finally, the font size was increased a little bit, which was also something noted by the second expert reviewer.

Based on the second expert review, the first research question was altered from "What outcomes do media literacy professionals and scholars identify as important to assess?" to "What outcomes do media literacy professionals and scholars identify as important?" In addition, one question about media literacy assessment recommendations was altered from: "What would be some other ways that you think the validity and reliability of media literacy assessment can be

improved?" to: "What would be some other ways that you think the *effectiveness* of media literacy assessment can be *enhanced*? The words validity and reliability may not be understood by all respondents. Furthermore, in a question about factors that may influence the way respondents assess media literacy, an extra factor was added: Access to technology and equipment. Finally, some grammar and spelling edits were made, such as adding words that were accidentally forgotten or left out.

Based on the third expert review, some changes were made to reduce the American bias that the survey may have. For example, a sentence was added to the first page of the survey that states: "While in this study the term media literacy is used, we recognize that in other countries than the United States and Canada it might rather be known as media education or media studies." This sentence was repeated on the next page of the survey, and the terms "media education" and "media studies" were added in parentheses next to the term "media literacy" in the first survey question in which media literacy is mentioned. In addition, two questions were added to the survey. First, a sub-question was added that would pop up when respondents indicate that they specify their outcomes. The question was added is: "You mentioned that you do specify outcomes. Who specified them?" In addition, one question was added to find out whether respondents developed their assessments themselves, whether the state or country developed them, or whether they were developed by others. Furthermore, based on the expert reviewer's comments, a statement in the question about identifying factors that influenced the way the respondent assessed media literacy, was altered from "government rules and regulations" to "standards and/or regulations developed by institutions such as the Ministry of (Public) Education or Department of Education" to clarify the phrase. Finally, some other minor edits were made. For example, the phrase "media literacy professionals and scholars have come

up with recommendations" was replaced by "media literacy professionals and scholars identified recommendations." Moreover, in the following statement, the word "clash" was replaced by the word "contradiction": "I believe that there is a clash between the control that is inherent to assessment and the development of critical autonomy in the learners."

Data collection. Survey data was collected in January and February of 2014. Consent was implied by the return of the survey. Media literacy organizations and individual media literacy scholars and professionals were emailed first. Subsequently, the media literacy scholars and professionals that were recommended by other respondents were contacted as well. Because the survey was anonymous, it was not possible to identify who responded to the survey. For that reason, no reminder emails were sent.

Data analysis. The quantitative data was analyzed using SPSS software. The SPSS file was automatically created by Qualtrics, although some variables had to be recoded before they could be analyzed. For example, unanswered questions had to be actively recoded as missing values. In addition, several new variables were developed. Most of these were computed variables. For example, all variables related to assessment methods were added up to calculate how many assessment methods were used on average by the respondents. The survey mainly provided descriptive statistics, such as frequencies, percentages, means, and standard deviations. The survey also included a few open-ended items. These items were coded qualitatively. If items only contained a few open ended responses (such as the "other" box that was added to many questions), they were simply described in the findings. If items contained many open-ended items, codes and categories were identified. This qualitative data was coded two times. First, the transcripts were coded by the interviewer using Microsoft Word to identify codes and categories.

The second iteration of coding was conducted using NVivo software. The identification of themes was mainly achieved during the second iteration of coding.

      Validity and reliability. The content validity of the survey was enhanced by using literature on media literacy assessment in addition to the 10 qualitative interviews. The input provided by the interviewees was vital for the selection of items in the survey. The validity of the quantitative survey was further enhanced by expert reviews of the survey provided by three media literacy professionals and scholars. These expert reviewers provided input on the clarity of the questions and the alignment of the survey questions with the research questions. In addition, respondents represented a wide variety of background and geographic locations. Even though the aim of this study is not to generalize, the maximum variation sample could increase the external validity of the study. Overall, data triangulation improved the study's validity as multiple data sources were used to understand a single phenomenon. According to Bryman (2006), "quantitative and qualitative research have their own strengths and weaknesses so that combining them allows the researcher to offset their weaknesses to draw on the strengths of both" (p. 106). For that reason qualitative data was gathered first to obtain an in-depth understanding of media literacy assessment, followed by quantitative data to validate and extend these findings with a larger sample.

      Creswell and Plano Clark (2011) describe several validity threats to mixed method research and strategies to minimize these threats. For example, to prevent selecting inappropriate individuals for the qualitative and quantitative data collection phases, Creswell and Plano Clark (2011) recommend using a small purposeful sample in the first phase and a large sample in the second phase. A small purposeful sample was therefore used for the qualitative interviews ($N = 10$) and a large sample for the quantitative survey ($N = 171$). In addition, different participants

should be used for each phase of data collection to prevent bias. The participants that were previously interviewed were therefore purposely not contacted to participate in the survey. Furthermore, interviewees and survey respondents were selected from the same population because the quantitative data builds on the qualitative data. Even though different participants were used in each phase, they were all media literacy scholars and professionals from all around the world.

Moreover, Creswell and Plano Clark (2011) recommend using major themes for the quantitative follow-up, rather than weak qualitative results. For that reason, only ideas, concepts, and statements and that were mentioned by multiple interviewees were included in the survey. Another mixed method validity threat mentioned by Creswell and Plano Clark (2011) is the inclusion of qualitative data without a clear intent of its use. The intent of using the qualitative data was therefore clearly specified throughout the study. The qualitative data was used to develop a quantitative survey to validate and extend the qualitative findings with a larger sample.

Other mixed methods validity threats mentioned by Creswell and Plano Clark (2011) relate to the interpretation of data, such as interpreting data in reverse sequence. In this study, qualitative data was interpreted first, followed by the interpretation of quantitative data, congruent with an exploratory sequential approach. Another error would be to compare the two data sets when they are intended to build on each other rather than merge (Creswell & Plano Clark, 2011). The qualitative data was therefore interpreted separately from the quantitative data. The quantitative data served to validate and extend the qualitative findings, rather than to be compared with the qualitative findings.

Chapter 4 – Qualitative Findings

To examine the status of media literacy assessment and related issues and challenges, qualitative methods were used to collect data through interviews with 10 media literacy professionals and scholars. This chapter is divided into four sections, each section providing an answer to one of the four research questions. The first section is about the outcomes the interviewees identified as important. The second section is about the ways the interviewees assess these outcomes. The third section shows the challenges identified with media literacy assessment and in the fourth section of this chapter the recommendations are offered by the interviewees regarding media literacy assessment.

Research Question 1: Media Literacy Outcomes

Goal of Media Literacy Education

Preparation and empowerment. The interviewees were asked about the overall goals and specific outcomes of media literacy education. Regarding the overall goal, almost all (9 out of 10 interviewees) mentioned the importance of preparing or empowering young people to successfully participate in contemporary society as informed and responsible citizens. Dr. Davis explained: "Because media and technology are so much a part of our society these days, to be successful in our society, you need to learn how to work with those things." Dr. Hammond stated: "Media literacy competencies should enhance people's quality of life in those three domains: at home, at work, and in being a citizen." Similarly, Dr. Adams articulated that media literacy education should prepare students for what he categorized as "three of the lives that we lead as adults." He explained:

We lead personal lives, where we are in contact with one another, so for instance on
Facebook, you might just be talking back and forth to friends and relatives, we have a

civic life, where we have to participate in democracy, be aware of public policy, be aware

of which of our legislators is supporting which issues, and to write them emails or to

protest or to visit their constituency office or to email them at their constituency office, so

that's our civic lives, and then we have our professional lives, where we use media—and

almost everybody is using media constantly at a relatively sophisticated level—to

conduct our career lives, and we need to be prepared and competent in all three of those

areas.

When teaching towards these goals, Dr. Sherman stated that it is important that it is a

collaborative process between teachers and learners. She explained that "it grows out of Paulo

Freire's notion of education for democracy's sake and really having education occur in the

classroom as a joint exercise between the teacher and the student." Many interviewees expressed

that they try to go beyond being didactic and top-down dissemination of information. Dr. Smith

stated that in her classes, she wants to move "beyond the sort of parroting that we really try to

avoid, into students' own active engagement and sort of unique interpretation." Related to this

active engagement is the notion of empowerment. Mr. Green explained for example that the goal

of media literacy education or of any form of literacy is "to give people a sense of power in the

world, a sense of agency . . . It's about empowerment and about helping people feel like the

stories that are in the world are comprehensible at a variety of levels." Rather than teaching

students to think about media in a certain way, most interviewees rather want their students to be

critically autonomous. Dr. Smith noted: "We are striving for critical autonomy on the part of

young people" and Dr. Lin stated: "the most important thing is to achieve critical autonomy,

critical and reflexive autonomy."

Pleasure and confidence. In addition to preparation and empowerment, three of the interviewees also mentioned the importance of increasing students' pleasure and confidence in media use, analysis, and production. Mr. Farrell explained that when students take a two year course with him, that his aim is that they get their qualification: and "that they've enjoyed what they've done and that they feel, in terms of the media, more confidence in the ways they might talk about it, write about it, and express themselves about it." Mr. Green also emphasized pleasure and said: "I want people to have a strong desire to ask questions about all the messages that are coming in and [to take] a great pleasure in that."

Protectionism. While interviewees were asked what their main goal was, many interviewees explicitly mentioned which goal they do not target. The interviewees from Canada, the United Kingdom (UK), and Australia all mentioned that they do not believe in protecting people from harmful media effects and that they actively try to stay away from that. Two interviewees from the UK therefore both stated their preference to use the term *media education* over the term *media literacy*. Mr. Farrell explained: I have always seen media literacy as very much an American term that tended to mean protecting young people, so I have kind of always shied away from it."

Dr. Davis stated that there is still a big debate around whether to protect or prepare students in the United States, while that debate was already over thirty years ago in Australia. This statement made it apparent that there seem to be two camps, the *prepare camp* and the *protection camp*. He said that the vast majority is in the "prepare camp" in Queensland, Australia. Dr. Adams from Canada explained why he believes in preparing students rather than protecting them:

And you know that one of the things he [David Buckingham] has said is 'preparation not protection.' . . . And I think that's pretty realistic, because at some point it's like drinking, driving, and sex, we have to be prepared to do this on our own, responsibly. And we can't just turn the corner, we can't turn a birthday and say: Okay, now you're ready. We have to rehearse. We have to understand, we have to develop, we have to make up our own minds and that comes with awareness and experimentation and rehearsal and failure and reflection and those things happen slowly, so, 'preparation not protection' is a pretty realistic motto to use, because of the fact that it does allow that gradual development, the same kind of thing that has happened to us in other skills and values areas in our lives.

Similarly, Ms. Brown stated that she sees a protectionist approach as an easy option within media literacy education. She said it is easy to show bad things that go on in the media and how cynical media are. She explained:

It's like training dogs. You can train kids to say: 'If the news is controlled by Fox, then we have to be very sort of wary of what they say and we're not going to believe any of it.' So you produce a kind of knee jerk cynicism in kids, that they know to bring out, they know how to perform that for the purposes of assessment, and you say: See media education, it has such fantastic effects. And you think, what a load of old rubbish.

In these previous quotes, a clear opposition against the protection camp does become apparent, and is often targeted towards media literacy education in the United States. Interestingly, none of the four interviewees from the United States considered themselves as solely protectionist in their media literacy practices. Dr. Smith, a media literacy scholar in the United States conducting research on violence and gender, noted that she tries to strike a balance between preparation and protection.

I do think about media literacy as an intervention, and that sort of places me in a

particular category as far as media literacy thinking goes and media literacy practice

goes, but on the other hand I also am acutely aware of some of the limitations of only

thinking of media literacy as an intervention and not also thinking of it as an opportunity

for the empowerment of young people and the chance for young people to engage in self-

expression or creative participation through media making themselves.

Later in the interview Dr. Smith also explained that she hopes that people will move beyond

thinking in camps and to have more conversations across theoretical differences. She explained:

I think there can be fruitful conversations across camps, so that people can maybe think

that there might be some value in another orientation toward media literacy that they

haven't necessarily specifically been trained in themselves, but that might prove fruitful

in their own interactions with young people around issues pertaining to media.

Context Dependence

In line with Dr. Smith, Dr. Maas from Belgium stated that there is not necessarily one

right or wrong goal or direction for media literacy education. When being asked about the goal

of media literacy education, Dr. Maas explained: "It's a bit of a difficult question because it

depends on where it is located, so I can't say there is one goal, I can just say there are a lot of

different people who feel that media education has specific goals." He stated that different

teachers can focus on different media in their teaching. The same is true for specific outcomes of

media literacy education. When being asked about the specific outcomes of media literacy

education, Mr. Farrell stated:

It would depend on what we selected to look at, because when you read the specification

for the course that I've run, there are a number of different optional routes through it. So

for example, you could go through the whole thing without looking at news. For

example, you could concentrate more on fictional media and so on, and I think that's fine,

it depends what route you take.

Similarly, specific outcomes also depend on the topic of instruction. For example, Dr. Smith

noted that the outcomes sometimes depend on what the media literacy program is about. She

explained: "I do work in violence and gender and bullying, other people do work in things like

pertaining to health, whether it's body image or there's work on tobacco use, [and] alcohol use."

"But so I think, sometimes, what knowledge, what attitudes, what skills, maybe less so skills, but

knowledge and attitudes are sometimes context specific when they're measured media literacy

efforts."

Specific Outcomes

Even though some interviewees stated that the outcomes depend on the context in which

they are taught, most were able to identify outcomes they regarded as important in their teaching

or their research.

Access to a wide variety of media texts. When the interviewees were asked about the

outcomes of media literacy education (such as knowledge, skills, and attitudes), most

interviewees noted the importance of having access to, an understanding of, and experience with

a wide variety of media messages. Mr. Farrell hopes that his students will leave his class

"perhaps and hopefully having experienced a wide array of media texts than they might

otherwise have done, because you made stuff accessible to them in the classroom that they

maybe wouldn't have come across." Ms. Brown similarly stated: "I think they should have a

wide experience of media, different kinds of media, so not necessarily just the mainstream, that

they are likely to have encountered a lot ever since they were babies."

Critically analyzing and evaluating media messages (critical thinking). To be able to critically analyze and evaluate media messages was one of the most often mentioned outcomes. The interviewees often related being able to critically analyze and evaluate media messages to critical thinking in general, as Dr. Hammond also stated explicitly: "Critical thinking lines up very nicely with the analysis dimensions of media literacy." Dr. Lin noted: "You have to have critical thinking. I think that is the core of media literacy." Similarly, Dr. Smith stated: "So critical in my view is analyzing something and assessing it and deconstructing it and understanding it fully and engaging in an open ended inquiry to try to develop those skills of application, comprehension, analysis, and sometimes even evaluation." In addition, interviewees related this critical thinking or critically analyzing and evaluating of media messages often to developing an active habit of inquiry. This means that interviewees wanted students to actively ask questions about the media, not just in school settings, but also in non-school settings such as at home. Mr. Green explained:

> I want my students to have a habit, where they say, so who is sending that to me, how does that relate to what I feel in my heart, how does this relate to who I am? Do I trust this, and who is trying to get me to do what and think what? And what else might I think in relation to this? I want people to take that story and just kind of, go out from there, and ask lots and lots of questions.

The active habit of inquiry appears to be an attitude that is not developed overnight. Dr. Smith explained: "The notion is that it should be an orientation that one develops toward the media in one's life where one brings a kind of an active and I keep using critical lens when one is spending time with media."

When students critically analyze and evaluate media messages, interviewees also

mentioned that it is important for students to be open-minded, flexible, and empathetic in their thinking. Dr. Sherman explained:

> So if you value evidence, then you should be willing to change your mind on how you feel about something, given better evidence or you should be able to be convinced that you were maybe wrong, and be willing to say that, willing to question your own biases as well as the biases in other things that you see.

Correspondingly, Mr. Farrell regarded it as important that his students would "actually become open to certain ways of thinking about things that they haven't experienced before . . . that they would just have a wider frame of reference and understand things a little bit differently."

Communicating, producing or creating media messages. The ability to communicate, produce, or create media messages was mentioned by 9 out of 10 interviewees. Dr. Adams noted that in Ontario, Canada, it is important that students "create a variety of media texts for different purposes and audiences, using appropriate forms, conventions, and techniques." Ms. Brown stated that students "should be having the opportunities to try things out creatively themselves" and Mr. Green stated that he would like his students to "be able to construct messages that tell their own story." Mr. Farrell also expressed the desire for storytelling:

> I would want them to actually leave the course being able to tell a story through film making, at a kind of basic level, actually to make a text that kind of makes sense for audiences. So that would be one of the things I want to take a way as a result of something I've taught them.

Reflect. Another skill mentioned by five of the interviewees was reflection on either students' own learning or on the influence of media in their lives. Regarding reflecting on students' own learning, Dr. Adams stated that one of the main outcomes in Ontario is for

students to "reflect on and identify their strengths as media interpreters and creators, areas for improvement, and the strategies they found most helpful in understanding and creating media texts." Regarding reflecting on the influence of media in student's lives, Dr. Lin mentioned that it is important for students to understand the relationship between media literacy and themselves. Dr. Sherman also explained the importance of reflecting on the influence of media in students' lives:

> And I also think, really crucial . . . is to be able to step outside of ourselves and reflect on how the media influence us, how we live in a mediated world and how we use media, how we are, kind of reflect on our ways of using media both in our personal lives and also in our academic lives.

Research Question 2: Assessment

Assessment Methods

Use of multiple assessment instruments. Rather than using one assessment instrument, most interviewees stated that they used or recommended the use of multiple assessment instruments. For example, Dr. Lin teaches a university level media literacy course and uses four different types of assessment. In her class, students have to write a multimedia blog, keep a news journal, do a media monitoring exercises in which they critically evaluate media messages, and take a quiz which consists of both closed-ended and open-ended responses. Dr. Lin also conducts research at elementary schools in Hong Kong and also uses multiple assessment methods there: surveys, focus groups, and class observations. Dr. Adams similarly stated that he always suggests to teachers to use multiple assessment methods, such as observation, media learning blogs, and the use of exemplars. Dr. Davis also explained that multiple methods of assessment

are used in media studies courses in Queensland, Australia, which are all put together in a

portfolio of work:

> In that portfolio of work, they have to present two pieces of what we call design work,
>
> which typically are film scripts and storyboards and that kind of stuff. Then they have to
>
> do two pieces of production work, and then they have to do two pieces of critique work.

As most of the interviewees use several assessment methods, the majority assess both the

learning process (such as student drafts, blogs, questioning or observations in class) and the

product (such as assessing work students have created, exams, or essays they have completed).

The assessment methods interviewees have used to assess the learning process will be described

next, followed by the assessment methods they have used to assess the product of their learning.

Assessment of the process. Almost all interviewees mentioned that they assess or that

their state, country, or individuals they work with assess the process of media literacy learning.

The assessment method that was mentioned most often (by six interviewees) was classroom

observation. Dr. Adams, who highly values assessing the process of learning media literacy,

explained the importance of classroom observation and assessing the process:

> So it's probably best if students either analyze or create media in the classroom rather
>
> than at home, because if they do it in the classroom they're there for the teacher to
>
> observe. If they do it at home, they come in with a finished product and the teacher
>
> doesn't know whether mom or dad or brother helped with that, and they get suspicious
>
> and they say: I can't be sure that this is an authentic work and therefore I can't be sure
>
> that this is authentic assessment.

Classroom observation can take place in different ways. While Dr. Hammond mentioned the use

of video documentation to keep a record of student learning, most interviewees observed their

students in person while teaching themselves or observing other teachers teach. When Ms. Brown explained how she observes the classroom, she expressed: "I'm listening to what they say; I'm maybe asking a question. I'm looking at the work they produce if they're doing something written or working with a film. I'm looking at how they interact with each other."

Another way of assessing the process mentioned by the interviewees was the creation of media (b)logs by students to keep track of the work they have been doing as they go through the process of analyzing or producing media messages. In addition, interviewees have used informal interactions, questioning in class, formal interviews, and focus groups to assess the process. They also provided formative feedback on student work, such as rough cuts, test shots, storyboards, or homework assignments. One interviewee also mentioned possible future use of (computer) tracking of student information to look at the process that learners use to search for information.

Assessment of the product. Most interviewees mentioned that they assess student learning by judging the product, often in addition to assessing the learning process. Several different methods were used by the interviewees or by their state or country to assess the product. Most of the time, students were given a performance-based assessment, such as a media analysis or media production assignment. Regarding media analysis, Dr. Sherman provides students with rich media documents and then asks questions about those documents. She explained that in one of these assignments they use a painting of first contact between European explorers and native people in the United States. She then asks students if they can identify from whose perspective and point of view the painting is made and what evidence they have for that. Dr. Smith explained that she often gives a media critique prompt to students before and after a media literacy session to see how they respond before and after the media literacy lesson. Regarding media production, Dr. Smith mentioned that she does a media making exercise every

time she meets with her sixth graders, such as short videos or public service announcements that students write on poster board.

Sometimes these performance-based assignments were bundled into a portfolio or a multimedia blog. For example, Dr. Lin's students take pictures, create a video, write text pieces or comics and put them on a multimedia blog. These portfolios or blogs also often include some process-related elements, such as rough cuts or storyboards. For example, the portfolios of Dr. Davis's students include three elements: design work, media critique work, and production work. Other methods that were used by the interviewees to assess the product were written quizzes and exams consisting of either open-ended essay questions or a combination of open-ended and close-ended items.

Evaluating and Interpreting Students' Work

Based on the previous two sections, it is evident that the interviewees used a variety of assessment methods. While students' performance could be scored using an answer key when using multiple choice items, the interviewees generally had to find ways to interpret and evaluate student work in more subjective ways. Some interviewees mentioned that they interpret student work against existing criteria that they developed. Compared to outcomes, these criteria are more specific and related to specific performances that can be measured. Dr. Adams calls these *success criteria* and stated that one can present these either as a list or a rubric. Dr. Davis stated that students in his state taking a secondary film and TV course receive a task sheet with clear instructions on what they will be assessed, in addition to being provided with a rubric. About half of the interviewees mentioned that they developed or used rubrics to evaluate students' work. The rubrics ranged from being rather loose to very specific. In these rubrics, students are often assessed on certain knowledge, skills, and attitudes, such as having an understanding of media

concepts, demonstrating ability to conduct detailed analysis of media messages, and being able

to creatively produce media products. Dr. Davis, who uses rubrics to assess key concepts,

provided an example of what an item in their rubric looks like:

> If we were to ask a student to write a script that demonstrates knowledge of languages
> and audiences, in the rubric it would probably say something like, for an A standard the
> student has written a highly sophisticated screenplay that shows knowledge of genre,
> convention, and the codes of filmic language.

Rather than looking for specific answers or right and wrong responses in the rubric, the

interviewees mainly used the rubrics to assess sophisticated and higher levels of thinking. Dr.

Hammond stated she is looking for good reasoning and complicated expression.

Correspondingly, Dr. Sherman explained:

> It's more about the depth of your analysis than that I agree with you or that you came to
> the same conclusion I came to. It's more what's your evidence, tell me about what made
> you come to that conclusion.

She noted that "people may have different answers. So the answers will be diverse and often

complicated so you're really looking for rubrics that will get at the sophistication and not the

correctness." Dr. Davis similarly explained:

> At the end of the day, to me, that kind of critical work is not about arriving at a correct
> answer, that critical work is about developing the capacity to do research, it's about
> developing the capacity to create an argument or to defend an argument, it's about
> developing the capacity to read conflicting or different perspectives and then to arrive at
> your own perspective.

In addition to the use of rubrics, some interviewees mentioned the use of exemplars to help

distinguish between different levels of quality in students' production work. These exemplars consist of products created by students at their own grade level, so they are age and developmentally appropriate. Incoming student work will then be judged against the existing exemplars. Dr. Adams and Mr. Farrell have both developed an exemplar collection that teachers can use as a benchmark.

Dr. Hammond also developed something similar to an exemplar collection related to media analysis work. Dr. Hammond used a performance-based assessment in which students watch a three minute news segment and then answer seven media analysis related questions. She stated that her research team took about 10 percent of the answers and looked at them holistically (not by item, but by the whole response). Based on these answers, the team divided them into four categories, ranging from excellent to poor. She explained: "That gives us an exemplar, so we create a coding sheet that essentially says, excellent answers often look like this, they often have these features." Coders then had to make a judgment in which category the other students' answers would fall. Dr. Hammond stated that the team had to go through the same process of analyzing a sample of answers depending on the population she was working with. Dr. Smith also created categories based on her students' work, but rather than developing themes and categories from a sample of student work, she used constant comparison and grounded theory to analyze and make sense of all open-ended responses, looking for categories and themes to emerge, and to, in Dr. Smith's words "let the students' responses categorize themselves."

Another method Dr. Smith used to interpret students' responses that was also used by Mr. Green was to organize students' responses according to Bloom's taxonomy (Bloom et al., 1956). Dr. Smith stated she used the Bloom's taxonomy to come up with labels, such as:

This student's response is an example of evaluation. That's one of the higher order bits of learning, because, it involves not just understanding something . . . and think of that as a fairly high level of engagement with the question and a pretty good indication of learning.

Mr. Green also used Bloom's taxonomy (Bloom et al., 1956), but rather than evaluating students' answers, he evaluated the questions that students generated. He stated that "loosely, for lower level thinking skills questions the answer is in the text. For higher level thinking skills questions, "the answer is in the human. The human that is answering has to do the work." Mr. Green is looking for questions that would require people to look inside themselves, rather than for answers in the text. He explained:

So, I'm looking for questions that require people to look inside themselves. Not what character was wearing a red dress, but why might a film maker have chosen to put that character in a red dress. And had that filmmaker chosen a different color, how might it have changed the scene? See, there's no answer to these questions. So those are questions that I can tell are on to something.

For more process-related assessments, interviewees often informally judged what happened in the classroom. When being asked what they looked for when observing students, interviewees often stated that they do not only look for specific skills, but that they also look at the broader social context. For example, Dr. Hammond stated that she looks at the overall context and classroom dynamics, and explained that when she observes other teachers, she looks at the interplay between the context, the teacher, and the learner. Mr. Green stated that he is constantly asking himself whether he and his students are building a community and a shared pleasure in opening up things for debate and a shared pleasure in shades of grey. Mr. Farrell

stated that students in media classes in England even get credit for their ability to work in a group, the media course being one of the only subjects in the country that assesses group work. Ms. Brown also stated that she is looking at the dynamic between the children, the teachers, and who is involved. She gives an example of the interactions of a group of children she observed working on a documentary:

> You could hear them using the language that you communally understand and [you could hear] them wrestling with a problem: "But how can we get it down to eight seconds? Okay, how about we go back to it?" There's an informed kind of professional dialogue going on there and you think: God, these kids are really good. They really know what they're doing. They really got the problem and they're engaging with it, and then you look at how they solve that problem and you think: Yeah, they already had learned a lot, they learned the language that made it possible for them to exchange that information and to work relatively quickly, but then you saw them encountering a new problem and dealing with it and solving it in a creative way.

Research Question 3: Assessment Challenges

Lack of Research and Agreement on How to Assess Media Literacy

One of the challenges regarding media literacy from a research perspective is a lack of research about the topic. Dr. Maas stated that that media literacy is not a very strongly developed field, in general: "It's like it's a hot topic but there isn't that much empirical research. So it's not that you can use some strong measurements which are accepted by a big community." Dr. Maas explained further:

> So that's definitely a challenge, that you don't have any consensus or sort of shared views on good measurement tools and I think if you look at other fields within psychology you

definitely have fields where there is some kind of agreement on how you should measure certain things. So that's a big problem.

Dr. Lin stated that to make media literacy a scientific academic discipline "we need to have a very concrete research method, research theory, and assessment standards. And we need a common view about what media literacy means, how it can be assessed." She stated that there is currently not a common standard or systematic way to assess media literacy. This statement seems related to a more general question about media literacy assessment that Dr. Smith pointed out. She stated:

> So I think one of the challenges of media literacy scholarship is to ask ourselves: Is there a global media literacy? Does context specific knowledge help build toward a greater understanding of media that can occur regardless of the context in which we're applying it? Or is it kind of bound a little bit by these major topics? And that I'm not sure, most of my own work has been bound by a particular topic. I'm not among the brave souls who've tried to say: These, whatever 20 items on a survey measure media literacy, regardless of what you're talking about.

While some media literacy scholars have attempted to develop a single media literacy instrument, most of the interviewees mentioned that media literacy assessment is a context-dependent endeavor. Dr. Lin explained that media use is very culturally specific, and that media literacy in the United States therefore means something different than media literacy in Mainland China, and that different age levels also require different assessments. Dr. Hammond similarly stated that she could not use the same coding scheme that she developed in a private school when she would do work with a largely African-American minority community. She explained: "We looked at them within their reference group, because you can't really compare the children of

Google executives to the children of factory workers on some kind of universal scale, that's just not fair." Dr. Smith similarly noted that whether her research team assesses media literacy education quantitatively or qualitatively is shaped by the context rather than their own ideas. For example, when she has a small number of students, they tend to assess them qualitatively, while if it is a large number, they tend to use mixed methods.

Defining and Agreeing on Clear Assessment Criteria

A challenge related to the lack of research and agreement on assessment methods is the struggle to define what counts as valid practice and knowledge. Mr. Farrell explained:

> You can look at some of those videos that kids make and I can say: Wow that's fantastic, that's really sharp editing, but then somebody else might say: Yea but what do they actually learn from that? And argue, they may say what people have said to me: Aren't you just valuing how far they can mimic an industry product?

Dr. Davis similarly stated that notions such as creativity are very hard to pin down. He explained:

> High school kids love making horror films. So when they make that horror film, if they follow the codes and conventions perfectly, and make a really terrific horror film, you could ask the question, well what have they really demonstrated there? Have they demonstrated creativity because they simply followed someone else's sort of template for a horror film? Or within following the template, have they shown some genuine creativity and ability and skill, and brought their own kind of sensibility and aesthetics to that. They're not easy questions to answer really.

Even when trying to clearly define assessment criteria in rubrics, Mr. Farrell stated that it is still very relative and open to teachers' interpretation how they then assess student work. He stated:

"Even within that, it's very very difficult, because there are criteria in there that say things like: excellent understanding or proficient or minimal and each of those things is only relative."

Interrater Reliability

Because some theoretical and philosophical concepts such as creativity may be up for debate, different teachers often interpret these concepts differently, based on their own background and beliefs. Dr. Davis stated that teachers' philosophy of media literacy relates to how they make judgments. A teacher with a more protectionist stance may evaluate students' answers differently than someone with a more progressive stance. Mr. Farrell also explained that teachers and examiners often take their own perspective to media literacy education, and that their philosophical orientation may then sometimes determine the way they interpret student work:

> I think if you come to a sort of Len Masterman kind of way saying: I want them to unmask dominant ideology or something, then you end up kind of looking for that, and if you don't see that in the work, then you think the work is worth less. Not worthless, but worth less than another piece of work. And I think that's quite difficult, to try to kind of be reflexive about those things and to sort of shake that off and to say: Okay, I got to put aside my own personal preferences and say well: What are our criteria here and how are they meeting them?

When teachers interpret students' work differently and do not agree on what counts as quality work, researchers would say that the interrater reliability is therefore low. Both Mr. Farrell and Dr. Davis serve on examination boards in their respective countries. They both stated that a lower interrater reliability seems to happen more in evaluating media production work rather than media analysis work. Mr. Farrell stated that his team changed grades in about half of the

work, even though it was a relatively small change in many of the cases. However, he also stated that "you do get a certain proportion, probably about 10% of schools where the changes are massive, like 25% of the mark or more and that's a real problem because you just see they don't understand the standard at all." Dr. Hammond whose team assessed media analysis work said that interrater reliability was sometimes also a problem in her research that required coding, but that it was not the case in more than 10% of the cases.

Difficult to Quantify Media Literacy Learning

Dr. Sherman expressed that the field of media literacy needs to find a way to show that media literacy education works:

> If we can't figure out how to assess this and really start racking up a body of research that shows that it works, then again, I think we're lost. I think that in today's world in particular, assessment is the name of the game.

Ms. Brown similarly stated that politically, one has to produce evidence that students have learned something. However, she explained that "producing evidence that makes sense to other people who probably don't necessarily know anything about what you're trying to do, and may be very skeptical about it is really really hard." Dr. Lin also stated that media literacy learning is very hard to quantify. Using more quantitative and standardized assessments to achieve this has not worked well for some interviewees. Mr. Farrell stated that only certain types of skills get assessed in standardized tests and exams: Mr. Farrell stated:

> And actually my experience of many years of actually assessing of both coursework and exams, I feel that exams end up just benefiting a very small proportion of kids who can kind of jump through the right hoops in a way. . . . They'll memorize what they need to memorize and they'll then knock it out.

One issue with more formal exams, according to the interviewees, is that they would often only allow for one correct answer or an answer that can be computer scored. Integral to media literacy, however, is the notion that a variety of responses may be correct. Dr. Smith stated that "sometimes the answer is: 'it depends'. And the most media literate answer in my opinion would be: It's not entirely right or entirely wrong but somewhere in the middle. And that's why sometimes the quantitative items can be tricky."

Dr. Sherman also explained:

> And the main challenge I see is that since it really is a pedagogy and not a content area, that we're not assessing what vocabulary do you know particularly. And therefore it doesn't lend itself to convergent questions like multiple choice questions or, in fact, fundamental to media literacy is that different people may interpret the same message differently. So you could all have right answers that are all different. So it doesn't map onto our standard way of assessing things, where everybody comes to the same answer, and so therefore I think that's a bit of a challenge.

Dr. Sherman stated that lower order thinking skills can be assessed pretty carefully using more quantitative assessments, but that she never found a quantitative scale of instrument that measures higher order media literacy skills effectively. Dr. Hammond similarly stated that she is not very interested in multiple choice or fill in the bubble assessments as she believes they measure lower order skills, such as recognition, rather than higher levels of thinking.

Lack of Control Over Assessment

Even though most interviewees stated that they would like to avoid certain types of assessments, such as standardized tests and formal exams, another challenge that the interviewees encountered is that they are often limited in their choice of assessment due to

standards and regulations developed by institutions such as the Ministry of (Public) Education or Department of Education. Mr. Farrell stated that when writing a specification for media studies, he always has to work within the rules that are set out by the Ministry of Education. For example, he is required to include timed written exams in the assessment specification of the secondary media studies course. He expressed frustration with the new education minister in the UK. He explained:

> He's changing a lot of things and so much of it goes completely against the way media educators think. And one of the things he's trying to cut out altogether is coursework. So everything will be based on terminal exams, which I think, if that happens with media, it would completely ruin the experience for students, for so many students get so much out of all of the elements of the production work.

He stated that it is a fault of the system that it has become too oriented towards results, exams, and having very particular skills. Ms. Brown also expressed her frustration with the government in the UK. She stated that:

> They have their own agenda about what should be learned. They're interested in how kids get to learn that stuff and how can they get in the sort of the PISA studies, how can we make our country come top of the table, international competitors and all this kind of rubbish, and really, you say, the kids are doing really well in media education and they say: Yes, so what? You know, who cares? I don't.

Dr. Hammond also expressed her frustrations with the educational system in the United States. She stated: "One of the reasons we're afraid of assessment is that in the US, hyper-individualization of assessment has led to this really awful situation in our education system, where teachers, where everything depends on the score that the child gets." Dr. Hammond stated

that she is personally much more interested in a more contextual and situational assessment of media literacy. Dr. Smith also expressed her concerns with high-stakes testing. She stated that the typical school day is very focused on teaching to the test and mandated high-stakes testing, which leaves little room for media literacy education in the schools, which is currently not included in these assessments. She stated that:

> There is a lot of teaching to the test and high-stakes testing that people have to worry about and so the school day is crowded with a lot of test preparation and this sort of thing [media literacy education] is not typically that germane to the test and so it's thought of as maybe an extra that people don't have the luxury of including in the day to day schedule.

Moving Beyond Assessing Lower Order Thinking and Content Knowledge

While the interviewees find it important to move beyond the assessment of lower order thinking skills to the assessment of higher order thinking skills, interviewees do sometimes find this difficult. In addition to rules and regulations that prevent interviewees from moving beyond assessing lower order thinking skills, interviewees stated that pedagogically, it is sometimes not easy either. Dr. Lin stated that students often mimic each other in her media monitoring exercise. She stated that after one group has presented their analysis, the second and third group will often follow the example of the first group. This keeps the students performing only at lower level thinking. Similarly, Mr. Farrell explained that when he assesses an essay exam he initially thinks that the students can understand and analyze a text really well "but actually then you read 10 more essays which are pretty identical and you realized all they've actually done is remember or learn what the teacher has told them." Sometimes a lack of teacher training seemed to be the problem as well. Ms. Brown explained that when she observed classrooms, she would sometimes

notice that when children went off on a tangent, asking a really interesting, yet difficult question, that teachers were often not prepared for it and would not know how to answer it. In addition, Dr. Davis stated that it was hard for teachers to understand how they might assess media literacy learning:

> We had a year four class where they made a film about a scientific process and it was a big task to get the teachers to move beyond just assessing the students' understanding of the scientific process and to get them to understand how they could assess the students' ability to shoot the shots well, to edit it together well, to record a voice over effectively and so on.

Ms. Brown similarly stated that she tried to have English teachers assess children's media learning. Rather than assessing media learning they would assess content knowledge instead. She explained: "They were always saying: Well media education is really really useful for improving kids' attainment in English. I said, but we don't want to know that. We know that happens, but what does their media learning look like?" Without proper teaching training and assessment models, media teachers will only focus on very basic use of media in their class and very basic assessment techniques, Ms. Brown explained.

Quality Assessments are Expensive and Time Consuming

Some interviewees stated that media literacy assessments that would capture media literacy learning such as higher order thinking skills is possible, but that it is simply time consuming, expensive, or too complex a task to develop and to use in classrooms. Dr. Sherman stated that media literacy learning of young children cannot easily be assessed, which makes it time consuming: "When we assess our stuff with 5-6-7 year olds, it means it has to be an individual interview and therefore it's going to take more time to assess." Dr. Lin, who uses

multiple assessment methods stated: "I have 41 students in my class. So it takes me a lot of time to go through the examination papers and the assignments each time." Ms. Brown also mentioned it is a management challenge. She noted that there are always too many children that need to be assessed, which therefore makes the assessment a blunt tool. She stated: "If you could just spend the whole time doing classroom observation all year long, let somebody else do the teaching, that would be fascinating and amazing, but who's going to pay for that?" Correspondingly, Dr. Hammond stated that her performance-based measure is a powerful tool to assess media literacy learning. However, she also explained that it does have disadvantages: "What I don't like about that measure is that it's really a time consuming measure because it has to be hand-coded and you have to have interrater reliability, you have to train coders. It's a very expensive measure." She therefore concluded that the real challenge is: "how to develop a cost effective and efficient measure of media literacy without oversimplifying or trivializing the robust competencies that we're trying to measure."

Contradiction Between Control Inherent in Assessment and Critical Autonomy

According to Dr. Maas, there are different approaches to media literacy and there are scholars who may be very skeptical towards the idea of assessment for theoretical and political reasons. He explained: "If you address questions such as assessment, I think it's important to realize that by itself assessment is quite, sort of, it's not a neutral thing to say, 'we're going to assess this.'" One of the issues that was brought up by some of the interviewees was that the control that assessment often automatically brings to the table often contradicts with the critical autonomy that interviewees want to develop in their learners. For example, Ms. Brown stated that she very strongly believes in personalized learning and that people should be able to set their own learning goals and assess these goals with the help of others, while politically one often has

to state general learning outcomes. She explained that written examinations or portfolios always create a situation in which people are teaching towards specific outcomes. She mentioned that "it cuts out the possibility that children's learning might take a different route." Similarly, Mr. Green stated that rubrics sometimes also control what students have to learn: "The rubric ends up dictating what they do, it becomes another way to steer them, and so, in fact, in some ways reinforces this idea that there's this outside power over them which is exactly like what I want to get away from."

One of the goals of media literacy education mentioned earlier by the interviewees was to give people a sense of power or agency in the world. However, when teaching towards specific outcomes, this somehow moves power from the student to the teacher. The challenge is to find a balance between the control of the assessment and the sense of power and agency that interviewees want to give students. Dr. Smith also talked about this seeming contradiction between critical autonomy and control of assessment as she stated: "I think that the trickiness is then how to avoid being dogmatic and how to truly promote kind of active learning at the same time that you're hoping that there would be sort of a deeper understanding." Mr. Green encountered the same contradiction and explained:

> My issues with assessment are connected to a paradox in my teaching in general. I want students to take control of their learning, to actively create their own narratives. So, I set up situations in which I try to promote this free thinking, and I ascribe value to such thinking. In so doing, however, I am stealing power for myself and shaping what they do; that is, I am establishing that certain ways of thinking and being (open-minded, comfort with shades of grey) are being better than other ways of thinking and being (absolutist, black and white). It's the age old question: how do we oppose prejudice without

exhibiting prejudice against people who are prejudiced? In teaching, how do we assess

how open-minded someone is without ourselves being closed-minded about close-

mindedness?

Mr. Green values students' own narratives and conversations with students. While he is actively

trying to shape and steer the story, he does not actually want to define the story, as assessment

may do. In that sense, assessment can get in the way of storytelling by prescribing the story, and

not naturally letting it evolve, similarly to how Ms. Brown wants to leave the classroom open for

other learning routes. In Mr. Green's words: "students' narrative is a tender plant, and we need to

be careful. Sometimes in an attempt to measure this plant, we break it. Or so it feels to me,

clumsy as I am at measuring."

Research Question 4: Recommendations

The interviewees offered several recommendations to overcome assessment challenges,

which will be described next.

Use a Variety of Assessment Methods

The majority of the interviewees mentioned that they can more validly and reliably assess

their outcomes by using a variety of assessment methods, rather than using a single assessment

instrument. Dr. Lin stated that she used four different assessment methods for her college class

and three assessment methods in her research on media literacy with elementary students.

Similarly, Dr. Adams stated when showing exemplars to students, assessing them during the

learning process with appropriate questions, and having students reflect on their learning using a

journal "you're almost triangulating, which means you're going to get a very valid measure of

student learning." Mr. Farrell mentioned that he believes it is important for students to develop a

wide range of skills. Therefore, he stated that one of his aims is to ensure that there will be a

broad range of different assessment instruments to measure these skills: "So there's some written stuff, but there's also some production stuff. There's some stuff to be done individually but there's some stuff to be done in groups and so on so that you can give the opportunity for a range of different skills to be assessed." That way everyone gets a chance to excel in different aspects, Mr. Farrell stated.

Dr. Smith and Dr. Maas, who both look at assessment from a research perspective, recommended using both qualitative and quantitative approaches when trying to assess media literacy education. Dr. Maas stated that it is not too hard to combine these approaches but that it does not happen often. Dr. Smith stated that:

> There's something very forceful in our society about quantitative claims and statistical analysis and I think policy makers want to know something definitive and sometimes our quantitative claims can seem more definitive to policy makers. . . . On the other hand, the qualitative data are very rich in terms of providing insights into how students are processing the questions that you pose and their responses and relationships to media.

Dr. Smith stated that quantitative and qualitative data work well together and when combining them "you could maybe say something fairly profound about the phenomenon."

Be Clear and Upfront about Criteria and Outcomes

Multiple interviewees expressed the importance of being clear and upfront about criteria and outcomes. Dr. Davis stated that "it's very important that the task that the teacher sets to students is very clear about which key concepts are being assessed and how they're being assessed." This is sometimes not easy when assessing concepts such as imagination or creativity. Dr. Davis stated that it is important to define these terms:

If you want students to show creativity, you're expected to show how they've been

creative through using the camera or through using the filmic language and conventions

and so on rather than just saying, well the student's been really imaginative,

sophisticated, and creative, which doesn't really say anything.

Dr. Davis and Mr. Farrell both stated that it is not fair for the student to set a task without

guidance on how they will be assessed, such as information about the type of film they should

make and what aspects of their response they should emphasize. It is therefore not only

important for the researcher or teacher to be clear about criteria, it is also important to

communicate this to the students. Dr. Sherman explained that students need to know what is

expected of them. She explained:

One of the first things I ask college students is: How many of you have been told you

should engage in critical thinking? And everybody raises their hand and then I say: So

what does that mean? And nobody raises their hand. Nobody has any idea what critical

thinking means. So I think that if we expect kids to engage in critical thinking, we then

well better tell them what we mean by that.

Dr. Davis stated that teachers are encouraged to talk students through the rubric when setting a

task, highlighting certain parts and discussing it together. Both Dr. Davis and Mr. Farrell stated

that especially production work can be valued by people in slightly different ways, and that it is

therefore important to explicitly define what to look for when assessing the piece. Mr. Farrell

stated that it is sometimes difficult to distinguish between 'excellent' and 'proficient', as these

terms are relative, and they therefore recommended the use of exemplars to make the different

levels of proficiency more visible. Dr. Adams and Mr. Farrell have both developed exemplar

collections online. These exemplar collections feature work that is created by students at their

own grade level and can therefore be used as a benchmark to judge incoming work against. Dr. Adams recommended that teachers build their own exemplar collections, not just for themselves but also to show to students so they have a sense of what they're supposed to accomplish. Mr. Farrell would give a list of assessment criteria to students and then show them some of the exemplars and ask them to look at the criteria and grade the videos based on these criteria, just as the teacher would do for their work. While Mr. Farrell recommended showing all levels of work to students, Dr. Adams recommended showing average work (work that would approximately get a 70% evaluation), so students will not get discouraged and so the work is hopefully within the proximal zone of development of learning for most students.

Even when clear criteria have been developed, some interviewees regarded it as a challenge that a teacher's philosophies and orientations would often influence the way they interpret student work, leading to lower interrater reliability. Mr. Farrell therefore recommended that people who assess media literacy should try to be reflexive and aware of their own preferences. Even though he stated it is not easy to put aside personal preferences, he believed that the key thing is to be able to be aware of these preferences and to look carefully at what the actual standards and criteria are and how they are being met. Mr. Farrell is also on a broader examination board that assesses exams of high school students and found that having discussions and dialogues with the other examiners also helped everyone to be more clear about the standards.

Be Comfortable With Broad Levels of Achievement

Even though some interviewees recommend being very clear and upfront about criteria and outcomes, interviewees also acknowledged that it is often not possible to be too precise when attaching a grade to student performance, as Dr. Davis explained:

One of my solutions is to not expect to be too precise, to be comfortable and happy enough with this idea that assessment is about broad levels of achievement, particularly when we're talking about what ultimately are philosophical concepts and what relates to creative practice.

Therefore, he stated that in Queensland "we're willing to accept that within that A range there'll be students who, some of whom are extraordinary and some of whom are doing just pretty good work. And we're willing to live with that." Similarly, Dr. Maas stated that sometimes all you can get is an approximation, and that that is acceptable. Mr. Farrell similarly stated that each grade in the UK has at least a 40 point spread. As a chief examiner he has to make sure other teachers have graded student work correctly. He explained that because each mark has 40 point spread, it allows teachers to be a bit inaccurate on several papers but still end up in the right range. He explained:

So, we'll try to get people more accurate, but there is kind of room for even if things aren't quite right, that actually they'll end up in the right grade. That does sound extremely sloppy but it is the truth, I think in the end.

Dr. Davis explained that in education people often search for correct answers, while schools, teaching, learning, and assessment are messy practices, and that in the end all they can do is approximate what has been learned. He therefore recommended that broad categorizations (such as A through F) are more realistic than trying to accurately tell a student who scored 80 from a student who scored 83. He explained: "I think within debates around assessment and so on there are many people who have now agreed that it's very difficult to be that precise when we are assessing student responses."

Look for Depth and Sophistication Rather Than Correctness

When interviewees explained how they interpret student work, they noted that rather than

looking for correct answers, they look for good reasoning and complicated expression (Dr.

Hammond), depth of analysis and sophistication (Dr. Sherman), or depth of thought (Mr. Green).

The interviewees have different recommendations on how to evaluate these outcomes. Dr. Smith

stated that it is important to keep an open mind about students' responses and to have space in

your assessment instrument for answers that may not fit with what you expect, but answers that

do show students' own active engagement and unique interpretations. She explained:

> Sometimes they [students] would actually use a topic that we came up with and turn it on
>
> his head and use it in a very unique way, and then we would categorize a response like
>
> that differently, because it kind of went above and beyond what was contained in the
>
> lesson plan and involved some kind of, the students really taking that and engaging
>
> themselves in further understanding or even a totally different understanding of that
>
> concept.

To avoid looking for correct responses, many interviewees also recommended assessing the

learning process, usually in addition to the product, so they would be able to see students'

thought processes. Dr. Davis stated that in the work leading up to a written response:

> I would expect to see evidence of research, of the student working through an internal
>
> debate or dialogue about the issue and then writing about it in a nuanced way that shows
>
> the knowledge and understanding of the overall debate rather than believing one thing or
>
> another.

Dr. Adams stated that "the process is the product in media education" and to make students'

thinking processes visible, he recommended the use of a media log or a journal so students can

write about their process of learning and their reflections. Dr. Adams also recommended classroom observations and in-class questioning to make students' thought processes more visible. He therefore proposed having students develop their products in class rather than at home, so teachers can better observe student learning. Even when assessing students' products, interviewees such as Dr. Sherman and Dr. Davis recommended the use of rubrics to evaluate students on the depth, sophistication, complexity in their responses.

More Research and Collaboration

As was mentioned in the section on challenges of media literacy assessment, many of the interviewees explained that there has not been enough research on media literacy assessment. Many interviewees noted that that more studies on media literacy assessment are therefore needed. Dr. Adams explained:

> Assessment is definitely the weakest part of media education. It's easy to put a device into a student's hands and say: Go make a recording of some kind. It's easy to show a student a video, a website, an advertisement, and say, think about this and analyze it. But the hard part is to make sure that that student at that age with that learning is demonstrating appropriate skills, so I think it's good that you're doing this.

Dr. Maas stated that the available measurements for media literacy are rather weak. He stated that work on media literacy assessment, such as piloting new measurement is therefore important. Even though he stated that it is a difficult area to work on and that media literacy assessment is only in its infancy, he also believes that it is a very important area. Mr. Green, who is a media literacy teacher, stated that if someone would develop more efficient assessment methods, such as an easy way to evaluate students' responses or questions after they watch a certain video, he would find that very useful.

Dr. Smith noted that there is still a lot of work needed on media literacy assessment. She explained that "longitudinal research is sorely missing from any kind of media literacy research that's out there and so that's something we really need as a field." She explained that it is unclear how long any behavioral effects of media literacy education last and that it is unclear whether media literacy skills transfer across subject areas. She also believes that media literacy researchers need to engage more closely in what the expectations about outcomes are. Dr. Smith also stated that people often tend to work in certain camps and that she recommended that researchers could have fruitful conversations across camps. She explained:

> So I'd like to see more conversations across theoretical differences across education and communication, and psychology, and public health, and other arenas where people are doing this sort of work, because our disciplines also frame the ways we ask these questions and the sort of data we receive. So I do think we need sort of a meta-conversation so that we can really advance the literature.

Chapter 5 – Quantitative Findings

Description of Respondents

The survey was completed by 133 respondents and partially completed by 38

respondents. A total of 171 responses are therefore included in this analysis ($N = 171$). The

partial responses included in this study contain both demographic information and full responses

to at least one of the four research questions. Respondents answering less than one complete

research question were excluded from the study. The number of responses varies per question for

two reasons. First, certain questions were only displayed to respondents who chose a specific

answer to a previous question. Second, the 38 respondents who only partially completed the

survey closed the survey at some point during their answering process.

Country of Residence

A total of 166 respondents reported their country of residence. These respondents are

from 37 countries in five continents, as can be seen in Table 8.

Table 8

Respondents per Country ($n = 166$)

Africa ($n = 3$)		Americas ($n = 44$)		Asia ($n = 10$)		Europe ($n = 82$)		Oceania ($n = 27$)	
Gambia	1	Bahamas	1	China	1	Austria	1	Australia	23
Nigeria	1	Brazil	2	Indonesia	1	Belgium	4	New Zealand	4
South Africa	1	Canada	2	Israel	1	Bulgaria	2		
		United States	39	Russian Federation	1	Croatia	5		
				Singapore	1	Czech Republic	1		
				Thailand	2	Finland	11		
				Turkey	3	France	1		
						Germany	4		
						Greece	4		
						Ireland	1		
						Italy	5		
						Lithuania	1		
						Malta	2		
						Netherlands	12		
						Norway	3		
						Poland	2		
						Slovakia	5		
						Spain	1		
						Sweden	5		
						Switzerland	1		
						United Kingdom	11		

The countries with the most respondents are the United States ($n = 39$), Australia ($n = 23$), the

Netherlands ($n = 12$), Finland ($n = 11$), and the United Kingdom ($n = 11$).

Media Literacy Role

　　Respondents reported their role in media literacy education, with the option of choosing

multiple roles. Out of 167 respondents answering this question, 103 are involved in media

literacy as a teacher, 87 as a researcher, 79 as a developer of media literacy materials, and 46

reported having another role in media literacy education. A total of 56.3% of the respondents

reported having more than one role in media literacy education.

　　On average, respondents who teach had 14.33 years of experience ($SD = 11.00$).

Respondents who conduct research had an average of 10.80 years of experience ($SD = 8.36$), and

developers of media literacy materials had an average of 10.54 years of experience ($SD = 8.88$).

As can be noted by the high standard deviations and by looking at Figure 3, there was a wide

range in the amount of experience that respondents had in their work related to media literacy.
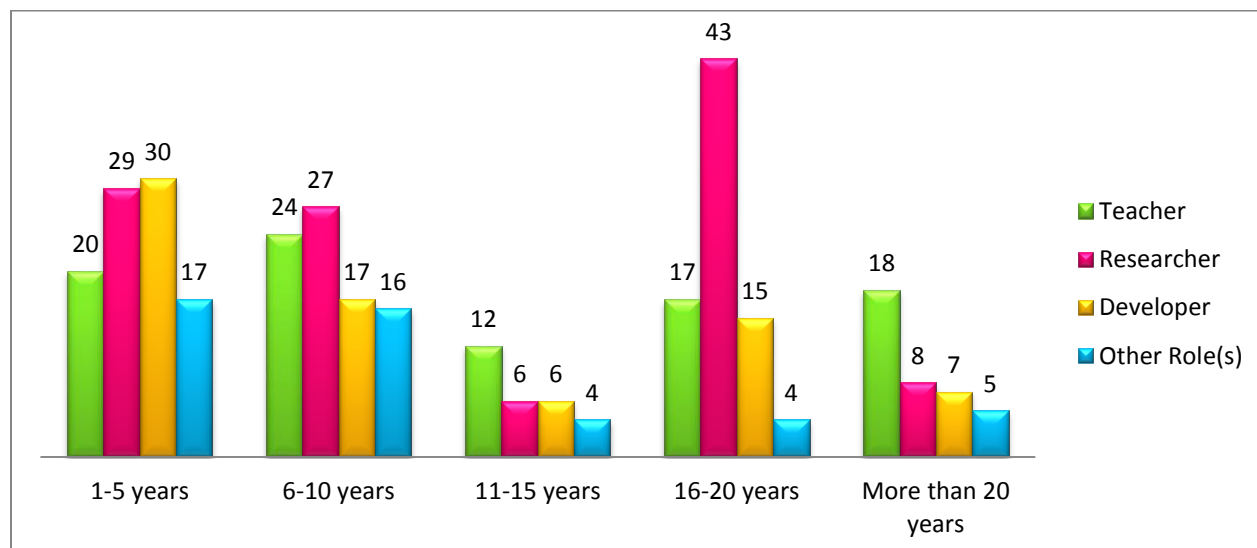
Figure 3. Amount of respondents with experience for each media literacy role

Target Populations

Media literacy scholars and professionals often focus their work on particular target groups. Respondents were therefore asked which populations they work with. Respondents had the option of choosing multiple roles, which 72.4% of the respondents did. A total of 170 respondents answered this question and their responses can be seen in Figure 4.
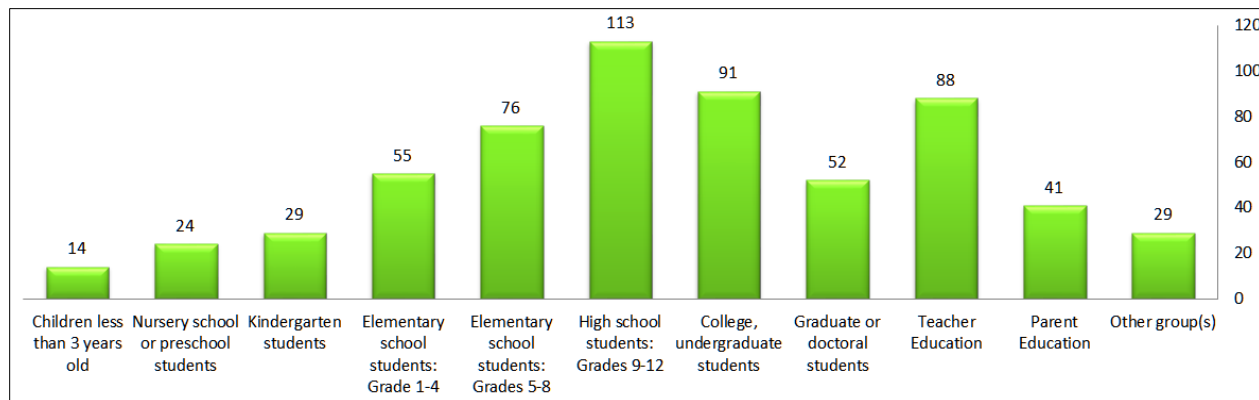
Figure 4: Number of respondents working with specific target populations

The respondents worked most often with high school students ($n = 113$), undergraduate college students ($n = 91$), and teacher education ($n = 88$). In addition to the responses shown in Figure 4, 29 respondents indicated they also work with other populations such as school management, media literacy organizations, non-governmental organizations, policy makers, professionals, (senior) citizens, staff at retirement homes, and special need students.

Subject Areas

While media literacy is sometimes taught or studied as a separate subject area, in other cases it is integrated in other subject areas, such as health education or language arts. Respondents were therefore asked whether they teach or study media literacy as a separate subject area or whether integrate it in another subject area. Out of 162 respondents responding to this question, 81 respondents (50%) only teach or study media literacy as a separate subject area, 41 respondents (25.3%) only integrate media literacy in a specific subject area, and 40

respondents (24.7%) teach or study media literacy as a separate subject area and integrate it in a specific subject area as well. Each of the 81 respondents who indicated that they integrate media literacy in a specific subject area was asked to which subject area(s) their work relates. Respondents had the option of choosing multiple subject areas, which 75.3% of the respondents did. Their responses are shown in Figure 5.
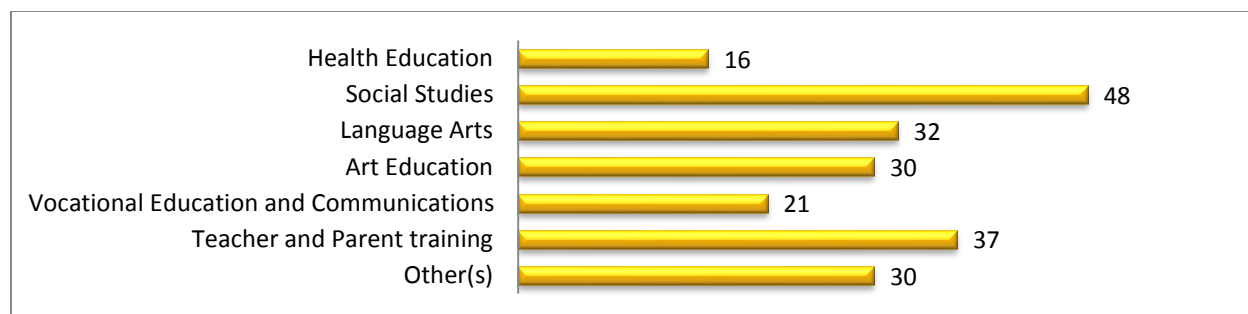
Figure 5. Number of respondents integrating media literacy in specific subject areas

The respondents most often integrated media literacy in social studies (*n* = 48) and teacher and parent training (*n* = 37). A total of 30 respondents indicated they also integrate media literacy into other subject areas than the ones already listed, such as science education, political science education, history, math, religious studies, ethics education, personal and social development education, film and screen studies, photography, and communication studies.

Research Question 1: Media Literacy Outcomes

Goal of Media Literacy Education

The respondents were asked about the overall goals and specific outcomes of media literacy education. Based on the qualitative interviews and a review of the literature, goals related to preparation and empowerment, protectionism, and pleasure and confidence were identified. Respondents were asked to what extent these goals are also important to them on a scale from one (not at all important) to four (extremely important). On average, the respondents

rated these goals as very to extremely important, as can be seen in Figure 6 (for a report of all

means, standard deviations, and the number of respondents per item, see Table I1 in Appendix I).

Goals related to protectionism were rated as very important ($M1$ = 2.81, SD = 0.98; $M2$ = 2.98,

SD = 0.89). Goals related to preparation and empowerment were seen as very to extremely

important ($M5$ =3.58, SD = 0.68; $M7$ = 3.69, SD = 0.58) similar to goals related to pleasure and

confidence ($M3$ = 2.99, SD = 0.89; $M4$ = 3.59, SD = 0.61; $M6$ = 3.38, SD = 0.71).
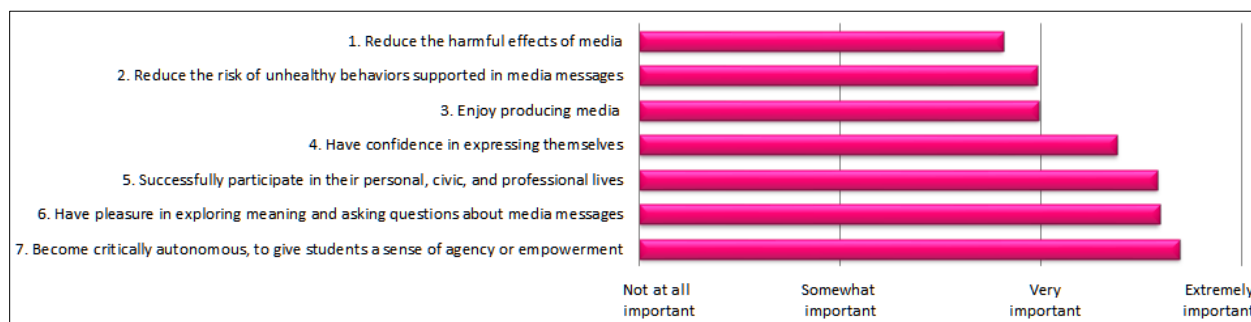
Figure 6. Media literacy goals ordered by importance

In addition to these predefined goals, respondents were also allowed to state their own goals,

which 31 respondents did. Some of them mentioned more specific goals related to their area of

teaching or research, such as "finding reliable information on the internet", and "promote media

literacy in the national policy agenda." Many of the goals were related to understanding the

influence of media, such as: "I want students to have a clear understanding of how media shape

their perceptions of themselves and the world", "I want to give my clients awareness in how

Media effects [*sic*] their perceptions of women, men and themselves" and "I want my students to

have a comprehensive understanding of the role of media in society." Most other respondents

stated more specific goals such as critical thinking and active, critical, and creative media

production, rather than broader goals as preparation, protection, and pleasure. For example,

respondents who considered media production as important stated: "I want my students to be

active and creative users of media", "I want students to be able to communicate successfully

using non-print media" and "an artful appreciation of and developing skill abilities in the diversity of telling stories through image and sound across many cultures." These more specific outcomes will be explained in more depth in the next section.

Specific Outcomes

In addition to broad goals, the respondents were asked about more specific outcomes they considered as important. Based on the qualitative interviews and a review of the literature, a set of outcomes were identified. Respondents were asked to what extent these outcomes are important to them on a scale from one (not at all important) to four (extremely important). On average, the respondents rated these goals as very to extremely important, as can be seen in Figure 7 (a report of all means, standard deviations, and the number of respondents per item can be found in Table I2 Appendix I).
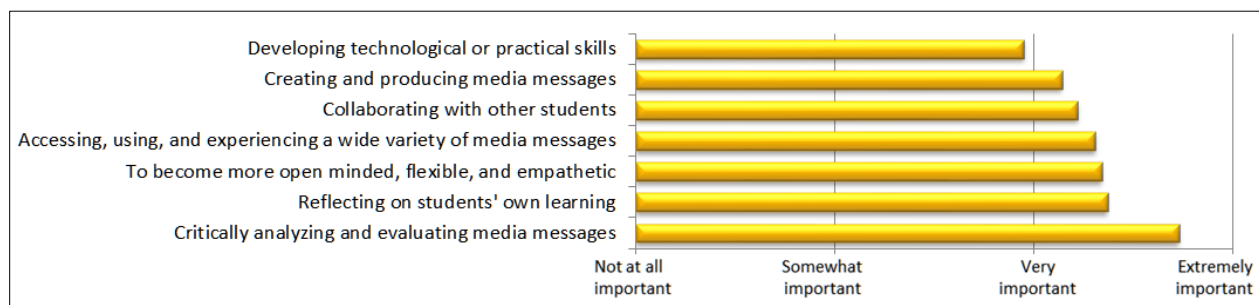
Figure 7. Specific media literacy outcomes ordered by importance

Overall, the outcome of developing technical or practical skills had the lowest mean ($M = 2.95$, $SD = 0.79$), although it was regarded as very important. Critically analyzing and evaluating media messages had the highest mean ($M = 3.73$, $SD = 0.51$), which means it was considered as very to extremely important.

In addition to rating these predefined outcomes, respondents were also allowed to state their own outcomes, which 12 respondents did. Many of the outcomes they mentioned related to the ones listed, such as "ethical reflection" and "critical awareness of risks and reflection on own

use of the Internet." Some responses were related to the individual's research or teaching such as: "understand the needs of people who are intellectually disabled in relation to their media use" Other outcomes that were mentioned were "understanding the social-cultural context of media and the messages embedded within", "appreciate the interaction of audience, content, and industry practices", and "to know the power of real experiences so they do not spend all of their time and attention immersed in mediated reality."

Specifying Outcomes

The importance respondents attach to certain outcomes does not automatically mean that they also define or specify outcomes in their own teaching, research, or development of media literacy materials. The respondents were therefore asked how well defined media literacy outcomes are in their work related to media literacy. Out of 169 respondents, 20 respondents (11.8%) stated that they do not specify outcomes, 94 respondents (55.6%) stated that they do specify outcomes, but that they are broad and open, and 55 respondents (33.5%) stated that their outcomes are very explicitly defined, as can also be seen in Figure 8.
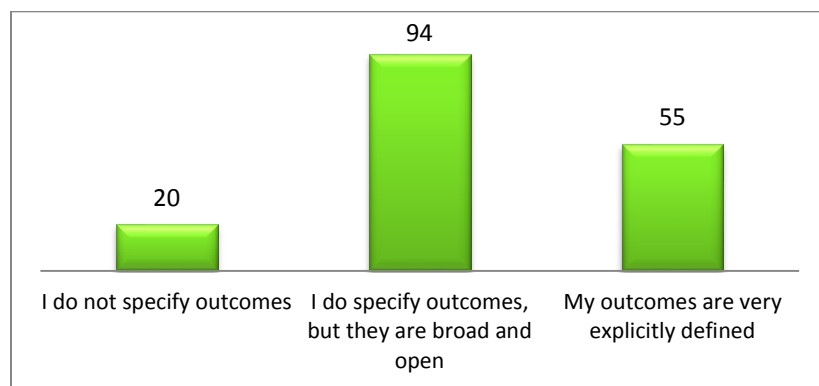
Figure 8. The extent to which outcomes are specified (*n* = 169)

The respondents who indicated that they do not explicitly define their outcomes were asked whether there are any specific reasons for that. Out of 20 respondents, 19 provided reasons. Eight respondents stated that they believe in personalized learning and that they

therefore do not want to set outcomes for a whole group of students. In addition, three respondents indicated that they want to leave the classroom open for other experiences to happen, rather than teaching towards the outcomes and one respondent indicated that he or she does not know how to specify outcomes. Seven respondents chose other reasons than the ones that were formulated in the survey. These respondents noted that stating objectives has simply not been a priority, that they look at media literacy on a more global scale, that stating objectives is simply a formality which relates to bureaucracy and love of money, or that it is not applicable to the work they do related to media literacy (such as research or developing a media literacy website).

The 149 respondents who indicated that they do use specified outcomes were asked who specifies these outcomes. Respondents were allowed to select multiple options, which 44.3% of the respondents did. As can be seen in Figure 9, total of 84 respondents indicated that they specify the outcomes themselves and 45 respondents indicated that the outcomes are specified in the media literacy materials that they are using for their lessons. Furthermore, 41 respondents indicated that the school or organization in which they work specifies the outcomes and 45 respondents indicated that their state or country specifies the outcomes.
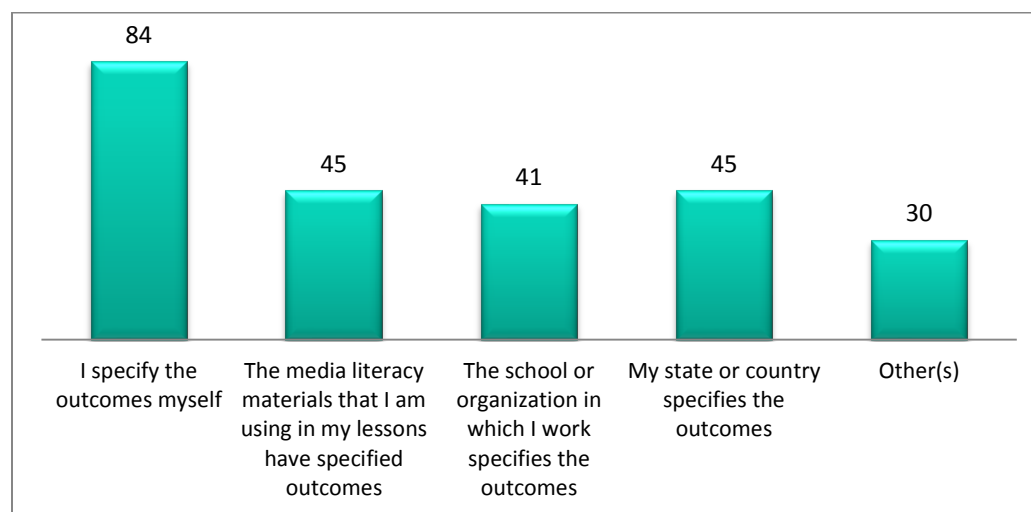
Figure 9. Explanation of who specifies the outcomes (*n* = 149)

A total of 30 respondents indicated other ways that they specify their outcomes. Some mention the use of specific guidelines, such as guidelines developed by UNESCO, NAMLE, the European Union, Renee Hobbs, International Baccalaureate for Film Studies, exam boards of specific countries, or funding agencies. Others mentioned that the outcomes they use are project and context dependent. Yet others noted that the outcomes they use are not specified by one person or organization but that they are a combination of their own outcomes, other teachers' outcomes, and national standards, or a combination of regional, national, and international standards and collaboration. Another respondent stated that he or she educates teachers, so the respondent allows the teachers to define their own outcomes.

Research Question 2: Media Literacy Assessment

Role of Assessment

Respondents were first asked what role media literacy assessment plays in their work by rating four statements on a scale from one (strongly disagree) to four (strongly agree). Respondents' answers were all close to the middle of the scale, as can be seen in Figure 10 (a report of all means, standard deviations, and the number of respondents per item can be found in Table I3 Appendix I).
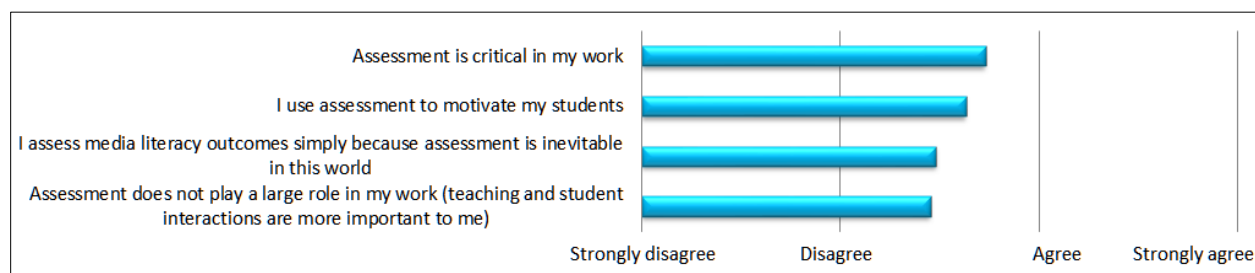
Figure 10. Means of responses to statements about the roles of assessment

Comparatively, the statement "assessment does not play a large role in my work (teaching and student interactions are more important to me)" had the lowest rating ($M = 2.45$, $SD = 0.89$)

while "assessment is critical in my work" had the highest rating ($M = 2.73$, $SD = 0.87$). In

addition, the statement "I use assessment to motivate my students" ($M = 2.63$, $SD = 0.70$) was

rated higher than "I assess media literacy outcomes simply because assessment is inevitable in

this world" ($M = 2.48$, $SD = 0.79$). Even though the differences were very small, this indicates

that respondents more often see media literacy as critical and motivating to students than they

view assessment as something that plays a small role and that is only done out of necessity.

Assessment Methods

Respondents were given a list of assessment methods and were asked which of them they

have used in their education or research. Their responses ($n = 158$) are displayed from most to

least often used in Figure 11. Respondents were allowed to select multiple assessment methods,

which 94.9% of the respondents did. On average, respondents used roughly eight different

assessment methods within their own work on media literacy ($M = 8.16$, $SD = 3.99$).
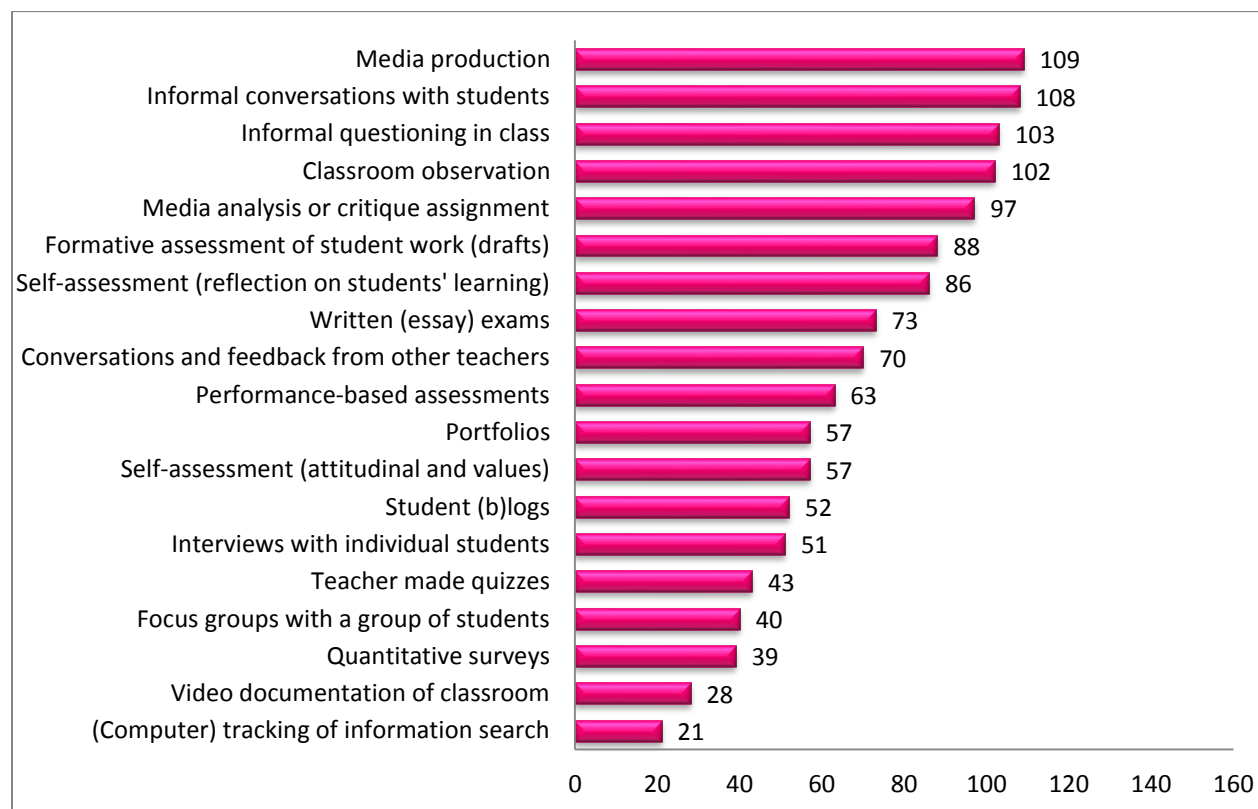
Figure 11. Assessment methods ranked from most to least used ($n = 158$)

Formative assessments such as informal conversations with students ($n = 108$), informal questioning in class ($n = 103$), classroom observation ($n = 102$) were especially popular as well as media production ($n = 109$) and media analysis or critique assignments ($n = 97$).

Development of assessment methods. Respondents were asked who developed the assessment methods that they have used before. A total of 139 respondents answered this question. Respondents were allowed to select multiple answers, which 42.4% of the respondents did. A total of 127 respondents indicated that the assessments were self-generated, which means that they and/or their colleagues developed them by themselves. A sum of 50 respondents indicated that their assessment instruments were developed by others such as developers of the curriculum and 31 respondents indicated that their assessment instruments were developed by the state or country in which they work. Other explanations regarding the development of assessment methods were given by 10 respondents. For example, some respondents indicated that they used standards by organizations such as UNESCO, NC Professional Teaching Standards, European Union, and Victorian Curriculum and Assessment Authority, and that they developed their own assessments based on these standards. Others indicated that the assessment methods were developed by the board of directors of the organization or foundation they work with or the school which they visit to teach or do research.

Assessing the learning product and process. Respondents were asked to what extent they focus on assessing the learning process (such as student drafts, learning blogs, questioning, or observation in class) in relationship to the product of learning (such as work students have made, exams, or essays they have completed). A total of 148 respondents answered this question and 11 of them stated that the question was not applicable to them, resulting in 137 valid responses. The mean was ($M = 2.89$, $SD = 0.79$) which is close to the middle of the scale. This

implies that respondents do not seem to have a strong preference of assessing the learning

process over the product as can also be seen in Figure 12.
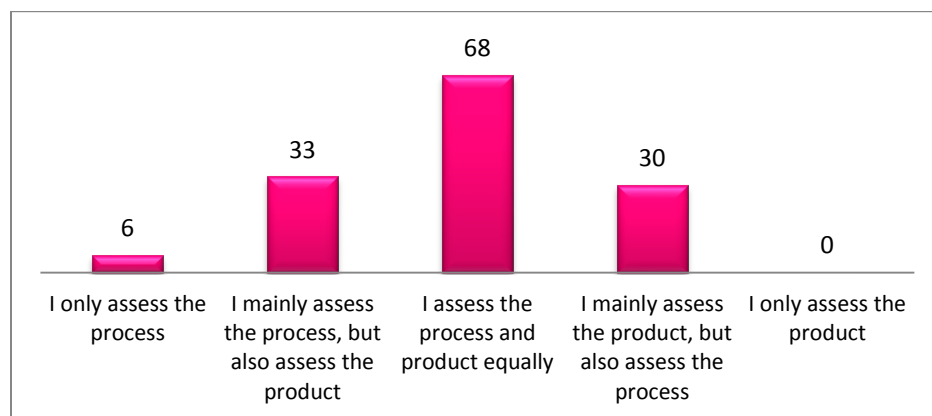
Figure 12. Assessment of the learning process and/or product (*n* = 137)

Almost half of the respondents (49.6%) stated that they assess the learning process and product

equally (*n* = 68). A total of 33 respondents (24.1%) mainly assess the learning process, but also

assess the product, while 30 respondents (21.9%) mainly assess the product, but assess the

process as well. A total of six respondents (4.4%) indicated that they only assess the learning

process and none of the respondents indicated that they only assess the product.

Importance of context. Respondents were given two statements about the importance of

context in assessment and were asked to choose the one they agree with most. The statements

were: "I believe that there is one set of global media literacy outcomes that can be assessed as a

whole, regardless of the context" and "I believe that media literacy will always need to be

assessed in a specific context and that a single media literacy assessment instrument can

therefore not be developed." A total of 154 respondents responded to the statements and the vast

majority, 78.6% (*n* = 121), chose the second statement, indicating that they believe that media

literacy needs to be assessed in a specific context. A smaller percentage of the respondents,

21.4% (n = 33) indicated that they believe that there is one global set of media literacy outcomes that can be assessed as a whole, irrespective of the context.

Evaluating and Interpreting Students' Work

For each of the chosen assessment methods, respondents were asked how they evaluated and interpreted students' work. Overall, respondents most often interpreted and evaluated students' work informally, by their own judgment (selected 533 times), followed by looking for depth of thought, evidence, or complex understanding (selected 491 times). In addition, respondents often used outcomes or criteria that are clearly expressed beforehand (selected 427 times), frequently looked at the overall context and classroom dynamics (selected 324 times), and sometimes also used rubrics (selected 254 times) or exemplars (selected 218 times).

A detailed account of how respondents evaluated and interpreted students' work for each of the individual assessment methods is displayed in Table 9. When looking at Table 9, it can be noted that the way respondents interpreted student work occasionally differed depending on the type of assessment method that was used. For example, the use of pre- and post-tests was used relatively often by respondents using quantitative surveys while the use of coding for categories and themes was used relatively often by respondents using focus groups, (computer) tracking of information searches, and quantitative surveys as assessment methods. The use of rubrics was often used for formative assessment and performance-based assessments, as well as for media analysis and production tasks. Moreover, the use of exemplars was used relatively often for media analysis and production work, as well as for formative assessment of student work.

Table 9

Evaluation and Interpretation of Student Work for Each Assessment Method

	Infor-mally (my own judg-ment)	Looking for depth of thought, evidence, or complex under-standings	Using outcomes or criteria that are clearly expressed before-hand	Looking at the overall context and classroom dynamics	Using a rubric	Comparing them to previously created exemplars	Coding for cate-gories and themes	Com-paring pre- and posttests	Using Bloom's taxonomy
Classroom observation (*n* = 89)	56	39	19	55	8	6	12	8	5
Conversations and feedback from other teachers (*n* = 57)	34	18	20	16	7	10	6	4	3
Video documentation of classroom (*n* = 20)	9	10	6	9	2	6	8	0	0
Student (b)logs (*n* = 43)	16	27	19	5	14	8	6	2	2
Informal questioning in class (*n* = 90)	70	40	13	45	5	5	7	3	7
Informal conversations with students (*n* = 92)	76	35	9	36	4	5	5	2	2
Formative assessment of student work (drafts) (*n* = 72)	19	34	46	10	30	21	13	10	7
Self-assessment (attitudinal and values) (*n* = 45)	18	21	18	15	5	6	7	9	2
Self-assessment (reflection on students' learning) (*n* = 67)	32	28	17	23	15	13	10	9	4
Interviews with individual students (*n* = 44)	26	21	9	10	1	4	11	3	3
Focus groups with a group of students (*n* = 31)	16	17	10	10	2	4	16	1	2
(Computer) tracking of information search (*n* = 15)	6	5	6	3	4	3	7	1	1
Performance-based assessments (*n* = 57)	19	25	34	15	28	13	6	6	4
Media production (*n* = 95)	40	46	55	28	37	39	17	6	8
Portfolios (*n* = 50)	15	25	30	10	18	17	10	3	2
Written (essay) exams (*n* = 62)	28	36	43	10	23	21	12	7	6
Media analysis or critique assignment (*n* = 83)	32	48	46	13	35	26	14	6	10
Quantitative surveys (*n* = 31)	9	5	14	3	7	8	11	11	0
Teacher made quizzes (*n* = 36)	12	11	13	8	9	3	6	9	3
Total	**533**	**491**	**427**	**324**	**254**	**218**	**184**	**100**	**71**

Factors Influencing Assessment

The way teachers and researchers assess media literacy may depend on certain factors,

such as time, regulations, and access to technology. The respondents were therefore asked to

what extent specific factors influenced the way they assess media literacy. Only respondents who

assess media literacy were asked to reply. Their responses are shown in Table 10.

Table 10

Factors Impacting Media Literacy Assessment

	Never	Rarely	Sometimes	Often	All the time	*M*	*SD*
Standards and/or regulations developed by governmental institutions (*n* = 110)	26 (23.6%)	20 (18.2%)	19 (17.3%)	23 (20.9%	22 (20.0%)	2.95	1.47
School regulations (*n* = 108)	24 (22.2%)	25 (23.1%)	34 (31.5%)	15 (13.9%)	10 (9.3%)	2.65	1.23
Amount of students I have to assess (*n* = 109)	20 (18.3%)	16 (14.7%)	40 (36.7%)	22 20.2%)	11 (10.1%)	2.89	1.22
Student characteristics (age, educational attainment, etc.) (*n* = 114)	7 (6.1%)	8 (7.0%)	30 (26.3%)	35 (30.7%)	34 (29.8%)	3.71	1.15
Time and/or money (*n* = 112)	10 (8.9%)	15 (13.4%)	36 (32.1%)	26 (23.2%)	25 (22.3%)	3.37	1.22
Access to technology and equipment (*n* = 110)	7 (6.4%)	20 (18.2%)	36 (32.7%)	22 (20%)	25 (22.7%)	4.14	1.46

On average, access to technology and equipment most often influenced the way respondents

assess media literacy (*M* = 4.14, *SD* = 1.46), followed by student characteristics (*M* = 3.71, *SD* =

1.15) and time and/or money (*M* = 3.37, *SD* = 1.22). On average, standards and/or regulations

developed by governmental institutions (*M* = 2.95, *SD* = 1.47) and the amount of students the

respondent has to assess *(M* = 2.89, *SD* = 1.22) sometimes influenced their assessment, while

school regulations only rarely to sometimes influenced respondents' assessment (*M* = 2.65, *SD* =

1.23). The large standard deviations indicate that the responses varied greatly among

respondents. For example, while 26 respondents (23.6%) indicated that standards and/or

regulations developed by governmental institutions never influenced their assessments, 22

respondents (20.0%) stated that these standards and regulations influenced their assessment all

the time.

Respondents could also identify other factors that impacted their assessment, which eight

respondents did. They mentioned that their assessment was influenced by the diversity of

students in one class, class size, the Institutional Review Board, the assessment context, load on students, parents, and teachers, European Union regulations and guidance, and the type of media or assignment used in the curriculum.

<p align="center">**Research Question 3: Assessment Challenges**</p>

Media Literacy Challenges

Respondents were asked about their assessment challenges in different ways. They were asked both open-ended and closed-ended questions. First, respondents were asked the following open-ended question: "Which challenges have you encountered when assessing media literacy?" This question was purposely asked before the close-ended question so respondents would be less influenced by the existing categories. Out of 94 responses to this question, 80 were valid. Answers such as "I am having difficulty in this area" or "I did not encounter any challenges" were deleted. Based on the responses, codes and categories were identified qualitatively. The main challenges identified by the respondents can be seen in Table 11. Only challenges that were identified by at least two respondents were included. A more comprehensive account of these categories, including examples for each category can be found in Table I4 in Appendix I.

Some of the reported challenges were congruent with challenges identified in the literature and first phase of the research. These are identified by the asterisk in Table 11. Respondents also mentioned challenges that were not previously mentioned, such as a lack of resources. This challenge was mentioned most often by respondents ($n = 11$). This lack of resources included a lack of equipment, technologies, examiners, and assessment materials. Second, 10 respondents mentioned that the focus of media literacy assessment is often on the assessment of lower order thinking, such as technical skills and that they often find it difficult to move beyond the assessment of lower order thinking. The assessment of higher order thinking is

seen as much more complex and difficult to do. Several respondents ($n = 8$) also noted that

formal assessments, such as multiple choice tests, may not capture true media learning. Several

respondents ($n = 8$) also stated that they feel limited by school or governmental regulations.

Eight respondents also perceived that there is a lack of interest in media literacy from people

outside of the field, making the assessment even more difficult.

Table 11

Media Literacy Assessment Challenges Identified by the Respondents

Challenges	*n*
Lack of resources	11
Focus on assessing lower order thinking and difficulty to move beyond it *	10
Formal assessments may not capture true media learning *	8
School or governmental constraints *	8
Lack of interest	8
Lack of time *	7
Varying student entry levels and perceptions	7
Lack of training *	6
Media literacy is too broad and too complex to measure	6
Lack of research *	5
Skills may not transfer to real life	5
Lack of comparability across classes and schools *	5
Lack of clear definitions and standards *	5
Media literacy is a changing field, making assessment ever-changing	4
Media literacy is always context bound, requiring multiple assessments *	4
Difficult to quantify media literacy learning *	3
Teachers and students have different goals and backgrounds	3
It is difficult for students to express themselves	3
Control inherent to assessment contradicts creativity and critical autonomy *	3

* These challenges were also identified by media literacy professionals and scholars during the interviews

Validating Previously Mentioned Challenges

In addition to the open-ended question, respondents were asked several close-ended

questions about the challenges they encountered regarding media literacy assessment. One of

these questions was intended to examine to what extent respondents encountered challenges that

were mentioned before by other media literacy scholars and professionals. Respondents were

given a list of media literacy assessment challenges that were identified by the interviewees in the first phase of the study and the literature on media literacy assessment. Respondents were first asked which of the challenges they personally encountered in their work. Their responses ($n = 133$) are shown in Figure 13.

Figure 13. Encountered media literacy assessment challenges ($n = 133$)

The most commonly encountered challenge was a lack of teacher preparedness and teacher training to assess media literacy outcomes ($n = 71$). The second most encountered challenge was that respondents who assessed a media production piece could not fully observe media literacy learning by only looking at the product as they missed the context in which it was produced ($n = 64$). Other commonly encountered challenges were that respondents found that

formal assessments (such as multiple choice questions or written exams) may not capture true media literacy learning ($n = 61$) and that media literacy outcomes are not explicitly defined ($n = 61$). This may make it unclear what should be assessed. A total of 58 respondents also indicated that assessments capturing higher order thinking skills related to media literacy are time-consuming, expensive, or complex to develop.

In addition to indicating which assessment challenges the respondents personally encountered, respondents were also asked to what extent they believe these statements are challenges for the field of media literacy education assessment. Respondents' answers were congruent with the challenges they have personally encountered. For example, a lack of teacher preparedness and teacher training to assess media literacy had the highest average rating ($M = 2.54$, $SD = 0.72$), which was also the challenge that was most often encountered by respondents. Similarly, only 20 respondents felt very limited when assessing media literacy due to outside influences. This statement also had the lowest average when respondents were asked whether they believed this was a challenge for the field of media literacy assessment ($M = 1.52$, $SD = 0.70$). Respondents' full responses, including percentages and the number of valid responses are shown in Table I5 in Appendix I.

Challenges per Assessment Method

In addition to reporting which challenges respondents encountered and identified as challenges for the field, they were also asked which challenges they encountered for each of the assessment methods that respondents used before. A detailed account of which challenges have been encountered for each assessment method that they used is displayed in Table 12. For the assessment methods that the respondents used, the respondents most often indicated that the assessment method was time consuming or complex to develop (selected 172 times).

Respondents also found it difficult to measure higher order thinking (selected 117 times) and to

get honest and authentic responses (selected 101 times) with the type of assessment they used.

Respondents were also not sure how to interpret or evaluate their students' responses with the

given assessment instruments (selected 91 times).

Table 12

Media Literacy Assessment Challenges for Each Assessment Method

	The assessment method is time consuming or complex to develop	It is hard to measure higher order thinking with this type of assessment	It is difficult to get honest and authentic responses	I am not sure how to interpret or evaluate my students' responses with this assessment	It is difficult to control the learning environment using this type of assessment	The assessment method is expensive to use or develop	This assessment method is too prescriptive or intrusive
Classroom observation (*n* = 52)	13	28	4	7	10	4	3
Conversations and feedback from other teachers (*n* = 27)	10	4	6	5	3	3	3
Video documentation of classroom (*n* = 14)	6	0	3	3	2	4	4
Student (b)logs (*n* = 21)	10	4	5	4	6	0	0
Informal questioning in class (*n* = 43)	8	7	16	7	8	2	2
Informal conversations with students (*n* = 47)	14	12	13	7	4	1	2
Formative assessment of student work (drafts) (*n* = 32)	17	6	0	5	2	2	2
Self-assessment (attitudinal and values) (*n* = 20)	4	3	12	5	2	1	0
Self-assessment (reflection on students' learning) (*n* = 29)	7	8	13	6	1	1	1
Interviews with individual students (*n* = 19)	7	3	7	5	2	0	0
Focus groups with a group of students (*n* = 15)	5	2	4	5	3	1	2
(Computer) tracking of information search (*n* = 10)	3	4	1	3	1	5	2
Performance-based assessments (*n* = 30)	13	4	1	6	4	5	7
Media production (*n* = 48)	18	11	1	8	6	14	3
Portfolios (*n* = 18)	6	1	2	4	1	5	3
Written (essay) exams (*n* = 25)	7	4	3	3	2	1	6
Media analysis or critique assignment (*n* = 31)	13	4	6	5	4	0	5
Quantitative surveys (*n* = 17)	6	6	2	1	3	2	2
Teacher made quizzes (*n* = 19)	5	6	2	2	1	2	4
Total	172	117	101	91	65	53	51

When looking at Table 12, it can be noted that the way respondents interpreted student work occasionally differed depending on the type of assessment method that they used. For example, respondents who were using (computer) tracking of information searches to assess learning found it challenging that the assessment method was expensive to use or develop. Media production was also seen as rather expensive to use or develop. In addition, respondents found it difficult to get honest and authentic responses using informal questioning in class and self-assessments. Respondents also found it particularly hard to measure higher order thinking using classroom observations, quantitative surveys, and teacher made quizzes.

Ideal Assessment

Respondents were asked if they would assess media literacy outcomes differently than they currently do if they were not limited by any constraints. Out of a 125 respondents answering the question, 41 respondents indicated that they would, 55 respondents stated that they would not, and 29 respondents indicated that this question is not applicable towards their work. The 41 respondents indicating that they would assess media literacy differently were asked how they would ideally assess media literacy. A total of 36 respondents provided answers that targeted the question. Based on the responses, codes and categories were identified qualitatively. Their answers are displayed in Table 13.

As can be noted by looking at Table 13, seven respondents indicated that they would ideally assess media literacy through practical work such as media production and analysis. Five respondents would ideally use a variety of assessment methods. Four respondents indicated that they would ideally use more personalized assessments, in which students are assessed as individuals, rather than part of a group. Moreover, four respondents would ideally take more time to assess media literacy outcomes. While only challenges that were identified by at least

two respondents were included in Table 13, many respondents also provided other answers to this question. For example, respondents indicated that they would use self-assessments, large scale ethnographic interviews, allow for more freedom in their assessment, improve existing tools, cooperate with schools, do more peer-assessment, get more training, and have better facilities and technologies.

Table 13

Respondents' Ideal Assessment Methods

Ideal Assessment	*n*	Examples
Through practical work	7	"More advanced practical work and certainly more practical work from younger ages" "Through media production and critical analysis of media products"
Use a variety assessment methods	5	"Triangulation between conversation, students teaching back, and students' production (of media or critiques)" "By combining several different assessment methods"
More personalized assessment	4	"More individualized assessment of media literacy through a diverse range of assessments that target students' particular needs, learning styles, interests, and abilities" "I would prefer a system of goal-based descriptive assessments that assess each student as an individual, not part of a cohort"
Having more time for assessment	4	"By increasing the time of the drafting processes for written assessments and increasing the time it took for planning, production & post-production of media projects" "My issue with the course I teach is that the students have to create evidence of their planning in a very prescribed way - and it is very time consuming to manage and monitor. The problem is, this leaves less time for students to try and fail - and I believe failing is a very important part of being creative and learning."
More depth, complexity, and detail in assessment	3	"More focused, more detailed, volunteers based, use the way of discovery, background searches etc." "More in detail"
Developing goals and integrating them in different contexts	3	"First, [we] would need to develop scope & sequence of goals for every grade level and subject area." "By integrating key outcomes for media literacy across the curriculum and by broadening assessment in other subject areas to include a dimension of media literacy"
More training	2	"Get trained in exam marking" "Resources for professional development"
Collaboration	2	"Cross-mark with another teacher who does not know my students" "Promotion of professional learning communities"
Longitudinal	2	"Mapping my students' evaluation in longer terms rather than only during the academic semester" "Make regular assessments so you can measure results over time"

Research Question 4: Recommendations

Overcoming Media Literacy Challenges

Respondents were asked about their media literacy assessment recommendations in different ways. They were asked both open-ended and closed-ended questions. First, respondents were asked how they had personally overcome any assessment challenges with the following open-ended question: "Could you describe how you have overcome any challenges you have encountered regarding media literacy assessment?" A total of 74 respondents responded to this question and 58 of these responses addressed the question and were therefore included in the analysis. Answers such as "not applicable" or "unsure" were deleted. Based on the responses, codes and categories were identified qualitatively. The categories are shown in Table 14. Only challenges that were identified by at least two respondents were included. A more comprehensive account of these categories, including examples for each category can be found in Table I6 in Appendix I.

Table 14

How Respondents Have Overcome Media Literacy Assessment Challenges

Solutions	*n*
Collaboration *	19
Being flexible and redefining assessments over time	14
Developing clear standards and criteria (which may depend on the context) *	8
Assess media literacy more formatively and informally	8
Allowing for freedom in assessment practices	5
Using a variety of assessment instruments *	5
Training and professional development *	5
Reserving time for assessment	4
Conducting more research *	4
Student input	3
Adapting existing models	3
Use of rubrics *	2

* These recommendations were also identified by media literacy professionals and scholars during the interviews

Some of the ways respondents have overcome media literacy challenges were congruent with recommendations identified in the literature and first phase of the research. These are identified by an asterisk in Table 14. Overall, 19 respondents mentioned that they have overcome media literacy challenges by collaborating with other teachers and other colleagues. In addition, 14 respondents indicated that they have overcome media literacy challenges by being flexible. They indicated that they improved, updated, and refined assessments over time. Moreover, eight respondents indicated that they have overcome media literacy assessment challenges by developing clear standards and criteria, which may be dependent on the context in which they were applied. Another eight respondents indicated they have overcome assessment challenges by assessing media literacy more formatively and informally.

Validating Previously Mentioned Recommendations

Respondents were also given a list of recommendations made by the interviewees in the first phase of the study. They were asked to what extent they agree that these recommendations would improve the effectiveness of media literacy assessment. Their results are shown in Figure 14. Respondents' full responses, including the number of valid responses, means, and standard deviations are shown in Table I7 in Appendix I.

As can be seen by looking at Figure 14, respondents appeared to agree that the recommendations offered by the interviewees in the first phase of the study would improve the effectiveness of media literacy assessment. The use of a variety of instruments ($M = 3.52$, $SD = 0.56$) and looking for depth and sophistication in students' answers, rather than right or wrong answers ($M = 3.52$, $SD = 0.67$) had the highest level of agreement. This means that respondents (strongly) agreed that that these recommendations would improve the effectiveness of media literacy assessment.
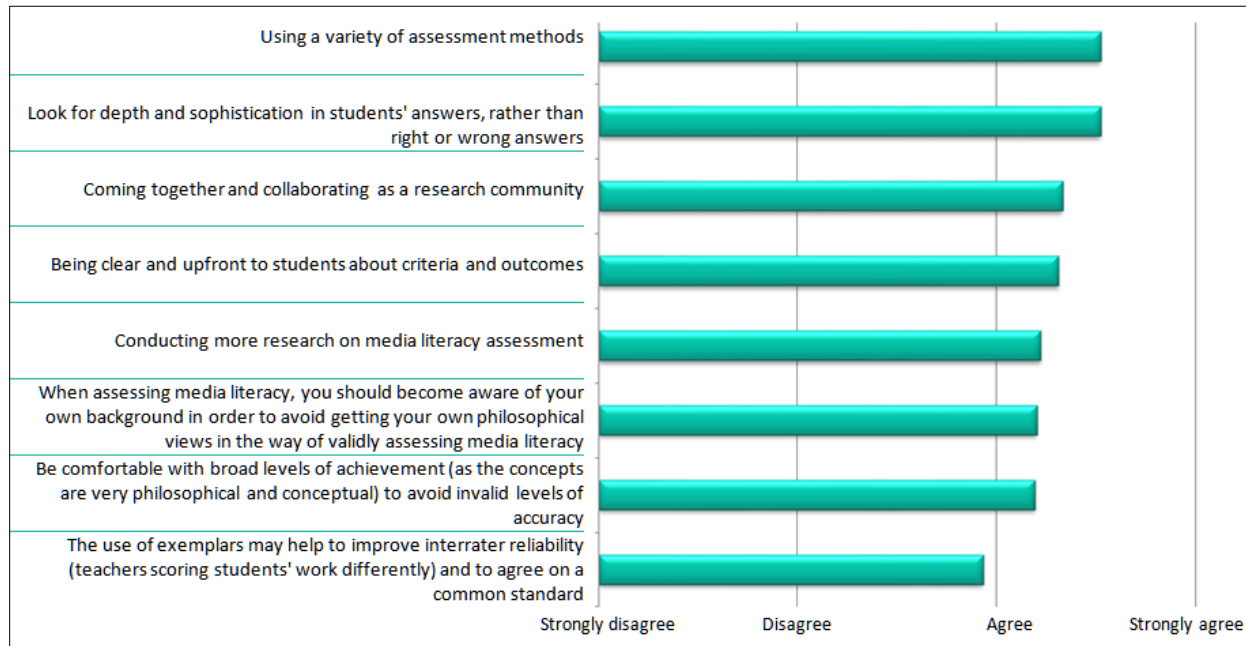
Figure 14. Respondents' agreement with previously offered media literacy recommendations

Improving the Effectiveness of Media Literacy Assessment

Finally, respondents were asked the following open-ended question: "What would be some other ways that you think the effectiveness of media literacy assessment can be enhanced?" A total of 48 respondents responded to this question. Forty of these responses addressed the question and were included in the analysis. Based on the responses, codes and categories were identified qualitatively, which are shown in Table 15. Only recommendations that were identified by at least two respondents were included.

Most recommendations provided by respondents were already addressed by media literacy professionals and scholars during the interviews and in the previous questions of the survey (as indicated by the asterisk). The respondents provided only two recommendations that were not previously mentioned. Three respondents indicated that the effectiveness of media literacy assessment could be enhanced by more awareness and respect for the field. In addition,

two respondents cautioned not to over-assess media literacy. The recommendations that were

most often given by respondents were the development of clear standards and criteria ($n = 7$),

more training and professional development $(n = 6)$, and more collaboration $(n = 4)$.

Table 15

Other Ways to Enhance the Effectiveness of Media Literacy Assessment

Enhancing Effectiveness	*n*	Examples
Developing clear standards and criteria (which may depend on the context) *	7	"Need scope & sequence, including developmentally appropriate expectations for goals at each grade level" "Clearer definition of media literacy and what are the unique characteristics of a media literate person"
Training and professional development *	6	"Effective professional development" "It's important to teach teachers to be more reflective on themselves and their work with children."
Collaboration *	4	"Our state, at one stage, had very effective regional teacher networks which were informal but incredibly valuable in planting and germinating ideas." "I like to emphasize this: Coming together and collaborating as a research community."
Allowing for freedom in assessment practices *	4	"We shouldn't be too prescriptive / dogmatic about assessment outcomes." "Because we do have flexibility in the contexts we choose, this can help create very interesting courses."
Assess media literacy more formatively and informally *	4	"Any methods which help media literacy enhance student formative assessments for holistic education" "Emphasis on process; critical reflection"
Using a variety of assessment instruments *	3	"Variety, multiple measures" "Engagement with a wide and varied range of media texts"
More awareness and respect the field	3	"More respect for media literacy in various disciplines" "An urgent awareness in leading institutions about the importance of media literacy for an informed citizenship and an awareness in educationalists"
Exemplars (when annotated and discussed) *	2	"Exemplars can help... but not by themselves. They need to be annotated and discussed, by students as well as teachers is essential." "Exemplars"
More research *	2	"It should be constantly tested for its content validity (as related to these agreed key concepts), but only future researchers will be able to truly assess its results." "Preparing a new system or scale to measure media literacy levels"
Assess in moderation	2	"To me assessment isn´t what is needed the most. And if it is most important for things to actually change, it is very sad evidence that something is terribly wrong with our society and its education." "Don't over-assess. Sometimes we do too much."

*These recommendations were also identified by media literacy professionals and scholars during the interviews and in the previous questions of the survey.

Chapter 6 – Summary and Discussion

The purpose of this study was to explore the views of media literacy scholars and professionals on media literacy assessment with the intent of using this information to develop a quantitative survey to validate and extend the qualitative findings with a larger sample. In this chapter, the results are summarized and organized per research question. In addition, the significance of the study, implications for practice, limitations, and directions for future research are discussed as well in this chapter.

Summary of Results

Media literacy outcomes. The first research question related to what learning outcomes media literacy professionals and scholars identified as important. In the literature, a paradigm shift is noted from using media literacy education for protection purposes to preparation purposes (Buckingham, 2003; Hobbs, 2005a). This shift was also very apparent in the qualitative interviews, as almost all interviewees mentioned the importance of preparing or empowering young people to successfully participate in contemporary society as informed and responsible citizens. In addition, many interviewees explicitly mentioned that they do not target protectionist goals. These interviewees targeted their opposition against the protection camp mainly towards media literacy education in the United States. The survey responses could not validate this shift, however. Even though the protectionist goals are comparatively seen as the least important compared to media literacy goals related to preparation and pleasure, protectionist goals were considered as important by the respondents. To accurately tell how countries differ in their views, more respondents would be needed for each of the countries represented in this study.

Regarding media literacy outcomes, three overall areas of competencies are often mentioned in the literature. These are competences related to access and use of media messages,

critical understanding (analysis and evaluation), and participation and the production of media

messages (ACMA, 2009; Aufderheide & Firestone, 1993; CML, 2008; EAVI, 2011; EC, 2009;

Livingstone, Couvering, & Thumim, 2008; Hobbs, 2010; Martens, 2010; NAMLE, 2007; OECD,

2009; Ofcom, 2008); P21, 2011; Tornero & Varis, 2010). When interviewees were asked to

identify their main outcomes, they identified similar outcomes. They regarded it as important

that students would be able to access a wide variety of media texts, critically analyze and

evaluate media messages (critical thinking), and communicate, produce, or create media

messages. They also regarded reflection as important, which was an outcome that was also

previously mentioned in the literature (Hobbs, 2010). A few interviewees also mentioned the

importance of collaboration and gaining practical or technological skills. Respondents were

therefore asked to what extent these outcomes were also important in their work on media

literacy. Overall, all of these outcomes were considered as very to extremely important, further

validating the qualitative findings. Comparatively, developing technological or practical skills

had the lowest rating, although they were still rated as very important. Critically analyzing and

evaluating media messages was rated as the most important. This finding is in line with the

literature, in which the critical analysis and evaluation of media plays a vital role (Buckingham,

2003, Hobbs 1998; NAMLE, 2007).

One of the issues in the literature related to media literacy outcomes is that media literacy

standards and competencies need to be developed to measure media outcomes (Christ, 2004;

Zacchetti, 2011). However, when the interviewees were asked about media literacy goals and

outcomes, many interviewees stated that one clear goal or set of clear standards and

competencies cannot be developed, as these competencies are always related to the context in

which they are taught. Interviewees indicated that goals and outcomes depend on the route

students take in a course and the topic of instruction. Similarly, 78.6% of the survey respondents indicated that they believed that media literacy will always need to be assessed in a specific context and that a single media literacy assessment instrument can therefore not be developed.

Even though these outcomes may depend on the context, Bergsma and Carney (2008) believe that media literacy scholars and professionals should be more precise about the concepts and skills to include in their lessons. Multiple interviewees agreed with this statement as they expressed the importance of being clear and upfront about criteria and outcomes. When survey respondents were asked to what extent they specify outcomes, 33.5% of the respondents indicated that their outcomes are explicitly defined and another 55.6% of the respondents stated that they specify outcomes, but that they are broad and open. Only 11.8% of the respondents stated that they do not specify outcomes. The main reason mentioned for not defining outcomes was that respondents believed in personalized learning and that they therefore do not want to set outcomes for a whole group of students.

Media literacy assessment. In the literature, several methods of assessing media literacy were identified, mainly related to research (e.g. Austin & Johnson, 1995; Hobbs & Frost, 1998, 2003; Irving and Berel, 2001; Kusel, 1999; Pinkleton et al., 2007; Primack et al. 2006; Primack et al., 2009; Vraga et al., 2009) and assessment in educational systems of different countries (e.g. British Film Institute, 2013; EMEDUS, 2014; New Zealand Qualification Authority, n.d.; VCAA, 2011). This study provided a broader view towards media literacy assessment. This perspective includes views of teachers and other practitioners and voices from respondents who reside in countries or states where formal media literacy assessments do not exist. While only one assessment method was employed in most research studies, most interviewees indicated that they used multiple assessment instruments in their work related to media literacy. Most

interviewees noted they assessed both the learning process and the product of learning. These qualitative findings were validated by the quantitative surveys. On average, respondents have used approximately eight different assessment methods within their own work related to media literacy. This is more in line with the literature on media literacy assessment in the few countries that do assess media literacy in their educational systems (British Film Institute, 2013; EMEDUS, 2014; New Zealand Qualification Authority, n.d.; VCAA, 2011). These countries often assess both the learning process and the product, employing a variety of assessment methods. Interestingly, none of the respondents indicated that they only assess the product of learning (such as exams or completed essays), which is a common practice in research studies assessing media literacy. Almost half of the respondents (49.6%) stated that they assess the learning process and product equally. In addition, 24.1% mainly assess the learning process, but also assessed the product, while 21.9% mainly assess the product, but assess the process as well. The most popular assessment methods among survey respondents were performance-based assessments or more formative classroom-based assessments. The assessment methods that were used the most were media production, informal conversations with students, informal questioning in class, classroom observation, and media analysis. While many research studies in the literature still rely on self-assessments, these were a lot less popular when looking at the interview and survey responses.

Participants were also asked how they interpret student assessments. Interviewees generally indicated that they interpret students' work in more qualitative and subjective ways, rather than using instruments or exams with right or wrong answers. They judge students' performance against criteria, often using rubrics and exemplars. Moreover, they look for depth and sophistication and also use Bloom's taxonomy (Bloom et al., 1956) to look for more

complex answers. They also indicated that they use informal judgment. These responses were further validated by the survey respondents. When respondents were asked the same question, the most popular ways of interpreting student work were by judging work informally, looking for depth of thought, evidence, or complex understandings, using outcomes or criteria that are clearly expressed beforehand, and by looking at the overall context and classroom dynamics.

Media literacy challenges. While there is no systematic information about media literacy challenges, several media literacy challenges were identified in the literature. Identified challenges are a lack of consensus over the appropriate methods to measure media literacy (Livingstone & Thumim, 2003), a lack of valid and reliable research instruments (Martens, 2010), a lack of explicit outcomes and criteria (Zacchetti, 2011), and a lack of assessment activities after media literacy education (Buckingham & Domaille, 2009). Scheibe and Rogow (2011) also mentioned it is difficult to measure higher order thinking.

Interviewees identified similar challenges, such as a lack of research and agreement on how to assess media literacy, challenges related to defining and agreeing on clear assessment criteria, and the difficulty to move beyond assessing lower order thinking and content knowledge. They also identified several other challenges, such as challenges related to interrater reliability, a lack of teacher training, difficulty to quantify media literacy learning, lack of control over assessment methods, and the fact that quality assessments are expensive, complex, and time consuming to develop. In addition, interviewees mentioned that the control that assessment often automatically brings to the table often contradicts with the critical autonomy that they want to develop in their learners.

When respondents were asked to identify challenges they encountered, many respondents mentioned similar challenges, further validating the qualitative findings and what is known in the

literature. However, the respondents also mentioned the importance of other challenges, which were not extensively mentioned in the literature or by the interviewees. For example, they mentioned a lack of resources, such as of equipment, technologies, examiners, and assessment materials. Another challenge mentioned by respondents was the variety of entry levels of students. This means that students entered the learning environment with mixed abilities and backgrounds, making it harder to assess what each student has learned. A lack of interest was also mentioned by respondents. Furthermore, respondents noted that media literacy assessment is not a priority by their government. In addition, respondents stated that most people simply do not know what media literacy means, and why it may be important. This may make the struggle for assessment even more complicated. Respondents also found media literacy too broad and too complex to measure as a whole and were afraid that skills learned in educational contexts may not transfer to real life. Respondents generally found the assessment methods they used time consuming or complex to develop. They also found it difficult to measure higher order thinking with these methods and difficult to get honest and authentic responses.

Several interviewees mentioned that they often felt frustrated because they were limited in their choice of assessment due to constraints beyond their control, such as standards and regulations developed by institutions such as the Ministry of (Public) Education or Department of Education. Respondents were therefore asked if they would assess media literacy outcomes differently than they currently do if they were not limited by any constraints. Out of a 125 respondents answering the question, 41 respondents indicated that they would, 55 respondents stated that they would not, and 29 respondents indicated that this question was not applicable towards their work. This indicates that constraints do to some extent pose a problem. When respondents were asked how they would ideally assess outcomes, they stated they would assess it

through more practical work, such as media analysis and production work, by using a variety of assessment methods, more personalized assessments, and taking more time for assessment.

      Recommendations. Literature regarding overcoming any media literacy assessment challenges is scarce. Interviewees provided several recommendations on how to overcome media literacy challenges. They recommended using a variety of assessment methods and looking for depth, complexity and sophistication in students' responses rather than correctness. In addition, they recommended being clear and upfront about criteria and outcomes, while at the same time being comfortable with broad levels of achievement. They also proposed to conduct more research on media literacy assessment and to collaborate among researchers. Respondents were asked to what extent they agreed with the recommendations that were made by the interviewees. By and large, they agreed to strongly agreed with all of their recommendations, validating the qualitative findings. Respondents were also asked to describe how they have overcome any challenges regarding media literacy assessment. Generally, collaboration with other teachers and colleagues helped them greatly to overcome any media literacy assessment challenges. Some other recommendations that were not previously mentioned by the interviewees were to assess media literacy more formatively and informally, allowing for freedom in assessment practices, more training and professional development, and reserving time for assessment.

Limitations

      Mixed method limitations. As in any research design, the exploratory sequential design had its challenges and limitations. For example, as data collection and analysis occurred in two phases, it required considerable time to implement the design. This challenge was factored into the study's timeline. The data collection timeframes were rather short for this reason. More responses may have been collected if it were possible to leave the survey open longer. In

addition, since the quantitative survey instrument could only be developed after the qualitative phase, it was difficult to specify details about the survey when applying for IRB approval. This study therefore required two separate IRB applications, which involved considerable time. In addition, in an exploratory sequential design procedures need to be carried out to ensure that the items on the instrument were valid and reliable (Creswell & Plano Clark, 2011). For that reason, expert reviewers reviewed the survey. Creswell and Plano Clark (2011) also recommended assessing the reliability and validity of the scores. However, this was not addressed in this study as it was an exploratory study.

Interviews. When recruiting participants for the interviews, an effort was made to represent a wide variety of voices. Even though the respondents came from six different countries, 8 out of 10 interviewees came from English-speaking countries. The other two interviewees had also spent significant time in English-speaking countries for their studies or work. Even though many other possible participants were contacted to participate as well, fluency in the English language often appeared to be a barrier to participate. This may have given the interviews a somewhat Western bias.

Survey. Countries in which English is spoken as the primary language were especially well represented in the survey. It therefore appeared that the language barrier may also have affected the responses to the quantitative survey. It was also easier to find media literacy organizations in English speaking countries. However, the snowball sampling method was used to overcome this difficulty. Media literacy organizations in countries with established assessment systems generally also appeared more willing to distribute the surveys among their members. This resulted in widely varying sample sizes from different countries, even though efforts were made to avoid this. Another source of sampling bias may relate to the chance that respondents

who agreed to participate in the study may be more enthusiastic about media literacy assessment or had stronger opinions about the topic than respondents who chose to ignore the survey. In addition, a purposive sample was chosen for this survey because the total population of media literacy professionals and scholars is simply unknown. This may make the external validity lower compared to a randomized sample. Moreover, even though the survey was made for all media literacy scholars and professionals, respondents who mainly identified their roles as a researcher wrote in comment boxes of the survey that they believed that the survey was somewhat biased towards teachers and other media literacy educators and felt like they could not express their voice well as researchers.

Another limitation of the study is the wording that was used in the survey. While efforts were made to prevent any geographical biases that the study may have, some respondents still indicated that the survey contained some biases. For example, one respondent noted that the survey did not completely take into account differences in educational systems across the world. She stated that the age of children in second grade in the United States differs from the age of children in the second grade in certain European countries. Therefore, it may have been better to add specific age levels to these categories. In addition, certain concepts may not have been clearly understood by respondents. An example is interrater reliability. Even though the concept was briefly explained in parentheses, some educators may simply be unaware of the meaning of the concept because of the way it was worded and therefore not see the connection to their own work. For that reason, they may have rated these concepts as less important compared to other concepts.

Another limitation of the survey was a technical one. Because of a technical error in the system, Qualtrics lost the qualitative data of a few open-ended questions. For example, 46

respondents indicated that they had another role in their work related to media literacy, besides teaching, research, or development of media literacy instructional materials. However, their qualitative responses could not be retraced by Qualtrics due to a technical error in the system. Regardless, the main research questions of this study could generally still be answered without the missing responses.

Significance of the Study

The literature on media literacy has to a great extent ignored the assessment of media literacy outcomes and associated challenges. This is the first study to address media literacy assessment in a comprehensive way. There have been many initiatives to assess media literacy, but these have never been synthesized or examined at a global level. This study provides a comprehensive view of the outcomes that media literacy scholars and professionals assess, the ways they assess media literacy and interpret student work, the challenges they encounter, and ways these challenges can be overcome. The overall purpose of this study was to first explore the views of media literacy scholars and professionals on media literacy assessment with the intent of using this information to develop a quantitative survey to validate and extend the qualitative findings with a larger sample.

Overall, the quantitative findings validated and extended the qualitative findings adding a more comprehensive account on media literacy assessment to the literature base. The study provided an overview of goals and outcomes of media literacy education. In addition, it provided information about the extent to which outcomes are specified, by whom these outcomes are specified, and explanations in case these outcomes were not specified. The study also offered a comprehensive overview of assessment methods that have been used by participants of the study, the role that media literacy plays in their work, and the entities which developed these

assessment methods. It provided further detail about the extent to which the learning process and product are assessed, the importance of context in assessment, approaches that are used to evaluate and interpret students' work, and factors that influence the way participants assess media literacy. The study also offered an overview of assessment challenges that have been encountered by participants and the extent to which these are considered challenges for the field. In addition, for each of the assessment methods that were used by participants, a distinct set of challenges was identified. An account of the extent that respondents felt constrained by any outside regulations or mandates was provided as well, along with a description of how they would assess media literacy void of these constraints. Finally, methods to overcome media literacy challenges were presented, along with recommendations to improve the effectiveness of media literacy assessment.

Implications for Practice

The results of this study can serve different populations. Media literacy professionals and scholars who are developing or using media literacy assessments can benefit from this study in several ways. For example, one of the findings of this study is that assessment appears to strongly depend on context. Rather than using a single instrument to assess media literacy as a whole, participants recommend to develop specific outcomes related to the context in which media literacy is taught and to align assessment instruments with these outcomes. Depending on the context, media literacy scholars and professionals can therefore have different goals and outcomes. They also recommend the use of a variety of assessment methods to assess these outcomes to both assess the learning process and product of learning. They recommend the use of both quantitative and qualitative data collection methods, which is something media literacy scholars can take into account.

Even though participants in the study acknowledge that outcomes may depend on context, they recommend being clear and upfront to students about expectations and outcomes. Yet, they also recommend being comfortable with broad levels of achievement on these outcomes because media literacy outcomes generally relate to philosophical concepts and creative practice. Broader categorizations are therefore more realistic than exact percentages. Percentages may provide media literacy scholars and professionals with a false sense of validity. In addition, the participants of this study propose looking for depth, complexity, and sophistication in students' answers, rather than correctness, even though this may make assessments more time consuming and difficult to develop. These are some considerations that other media literacy scholars and professionals can take into account when designing and developing their own assessment methods.

The participants in this study also noted that collaboration among media literacy scholars and professionals helped them overcome challenges related to assessment. It is therefore recommended that media literacy scholars and professionals find ways to collaborate with other teachers and researchers and that media literacy organizations and institutions develop platforms to facilitate collaboration. When collaborating, media literacy professionals and scholars can design and develop assessments together, share good practices, and cross-grade student work.

In the literature it was apparent that even though media literacy was taught in many countries, it is only a substantial and assessed part of the school system in a few countries (Buckingham & Domaille, 2009). Therefore, there is still a lot of work to do in order for the practice of media literacy assessment to thrive. Policy makers and developers of country- and state-based assessments can therefore learn from recommendations made in this study by participants from countries that already have established assessment criteria, standards, and

methods. For example, participants in this study mentioned that certain media literacy assessment challenges may be overcome by more resources, collaboration, teaching training, and professional development. In addition, several participants stated that even though standards and criteria are very well articulated in their countries, they are not prescriptive. For example, educators still have autonomy about how these experiences are taught and assessed. Hence, schools and teachers still have the freedom and flexibility to offer individual experiences to students. Many participants in the study also recommended the use and sharing of resources, exemplars, and rubrics. Media literacy organizations, schools, and governments mandating media literacy could therefore cooperate on the development of exemplar collections, websites with context specific resources, and assessment materials. Policy makers and developers of country and state based assessments could take these recommendations into account when developing policies regarding media literacy assessment.

Directions for Future Research

Based on the study's findings and limitations, several recommendations for further research can be made. For example, it was not possible to accurately tell how and to what extent countries differ in their views on media literacy assessment. Even though this study had participants from 37 different countries and therefore provided a comprehensive overview of media literacy assessment, more participants from each country would be needed to explain any geographical differences. A study incorporating more voices from each country would therefore be needed to compare countries.

In addition, many participants recommended conducting more research on media literacy assessment because it is an underdeveloped area in the literature. An example of an area that is underdeveloped is research on transfer of media literacy skills learned in educational contexts to

out-of-school contexts. It is currently unknown whether media literacy knowledge, skills, and attitudes are also transferred to students' out-of-school contexts. Furthermore, longitudinal research on media literacy assessment is unavailable. It is unknown if students maintain their media literacy knowledge, skills, and attitudes after their education ends. More research is therefore desired in this area. Since this is the first study to provide a comprehensive overview of media literacy assessment, it will hopefully serve as a starting point for future research in this area.

References

Airasian, P. W., & Miranda, H. (2002). The role of assessment in the revised taxonomy. *Theory Into Practice, 41*(4), 249-254.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior.* Englewood Cliffs, NJ: Prentice-Hall.

Alexander, P. A., Dinsmore, D. L., Fox, E., Grossnickle, E. M., Loughlin, S. M., Maggioni, L., . . . Winters, F. I. (2011). Higher order thinking and knowledge: Domain-general and domain specific trends and future directions. In G. Shraw & D. H. Robinson (Eds.), *Assessment of higher order thinking skills* (pp. 47-88). Austin, TX: Information Age Publishing, Inc.

Anfara, V. A., Brown, K. M., & Mangione, T. L. (2002). Qualitative analysis on stage: Making the research process more public. *Educational Researcher, 31*(7), 28-38. doi: 10.3102/0013189X031007028

Anderson, L. W. (Ed.), Krathwohl, D. R. (Ed.), Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., . . . Wittrock, M. C. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives* (Complete edition). New York, NY: Longman.

Appalachian State University. (2013). *REICH College of Education: Conceptual framework.* Retrieved from http://rcoe.appstate.edu/about/conceptual-framework

Arke, E. T., & Primack, B. A. (2009). Quantifying media literacy: Development, reliability, and validity of a new measure. *Educational Media International, 46*(1), 53-56.

Arter, J. A., & Salmon, J. R. (1987). Assessing higher order thinking skills: A consumer's guide. Portland, OR: Northwest Regional Educational Laboratory.

Aufderheide, P., & Firestone, C. (1993). *Media literacy: A report of the national leadership conference on media literacy.* Queenstown, MD: Aspen Institute.

Austin, E. W., & Johnson, K. K. (1995). *Direct and indirect effects of media literacy training on third graders' decision making for alcohol.* Paper presented at the meeting of the International Communication Association.

Austin, E. W., & Johnson, K. K. (1997a). Immediate and delayed effects of media literacy training on third graders' decision making for alcohol. *Journal of Health Communication, 9*, 323-349.

Austin, E. W., & Johnson, K. K. (1997b). Effects of general and alcohol specific media literacy training on children's decision making about alcohol. *Journal of Health Communication, 2*, 17-42.

Austin, E. W., Pinkleton, B. E., & Funabiki, R. (2007). The desirability paradox in the effects of media literacy training. *Communication Research, 34*(5), 484-506.

Australian Communications and Media Authority. (2009). *Digital media literacy in Australia – Key indicators and research sources.* Canberra, Australia: Author.

Banchi, H., & Bell, R. (2008). The many levels of inquiry**.** *Science and Children, 46*(2), 26-29.

Baran, S. J., & Davis, D. K. (2012). *Mass communication theory: Foundations, ferment and future*. Boston, MA: Wadsworth.

Bazalgette, C. (Ed.). (1989). *Primary media education: A curriculum statement*. London, England: British Film Institute.

Berel, S., & Irving, L. M. (1998). Media and disturbed eating: an analysis of media influence and implications for prevention. *The Journal of Primary Prevention, 18*(4), 415-430.

Berger, P., & Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge.* Garden City, NY: Anchor Books.

Bergsma, L. J., & Carney, M. E. (2008). Effectiveness of health-promoting media literacy education: A systematic review. *Health Education Research, 23,* 522-542.

Billing, D. (2007). Transfer of core/key skills in higher education: cognitive skills. *Higher Education, 53*(4), 483-516.

Bloom, B. S. (Ed.), Engelhart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D.R. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook 1: Cognitive domain.* New York, NY: David McKay.

Bol, L., & Strage, A. (1993, November). *Relationships among teachers' assessment practices and their student outcome and study skill development goals.* Paper presented at the annual meeting of the Mid-South Educational Research Association, New Orleans, LA.

Bragg, S. (2002). Wrestling in woolly gloves: Not just being critically media literate. *Journal of Popular Film & Television, 30*(1), 41-51.

Bransford, J. D., Brown, A. L., Cocking, R. R. (Eds.). (2000). *How people learn: Brain, mind, experience, and school. Expanded edition.* Washington, D.C.: National Academy Press.

Brereton, P. (2001). *Continuum guide to media education.* London, England: Continuum.

British Film Institute. (2013). *Statistical yearbook 2013.* Retrieved from http://www.bfi.org.uk/statisticalyearbook2013/

Brookhart, S. M. (2010). *How to assess higher-order thinking skills in your classroom.* Alexandria, VA: ASCD.

Bryman, A. (2006). Integrating quantitative and qualitative research: How is it done? *Qualitative Research, 6*(1), 97-113. doi:10.1177/1468794106058877

Buckingham, D. (1998). Media education in the UK: moving beyond protectionism. *Journal of Communication, 48*, 33–43. doi: 10.1111/j.1460-2466.1998.tb02735.x

Buckingham, D. (2003). *Media education: Literacy, learning and contemporary culture.* Cambridge, MA: Polity Press.

Buckingham, D., & Domaille, K. (2009). Making media education happen: A global view. In C. K. Cheung (Ed.), *Media Education in Asia* (pp. 19-30). Dordrecht, the Netherlands: Springer. doi:10.1007/978-1-4020-9529-0_3

Byrne, S. (2005, May). *Effective and lasting media literacy interventions.* Paper presented at the annual meeting of the International Communication Association, New York, NY.

Byrne, S. (2009). Media literacy interventions: What makes them boom or boomerang? *Communication Education, 58*(1), 1-14.

Caronia, L. (2009). Co-viewing in an Italian classroom. *Journal of Children & Media, 3*(3), 267-285.

Center for Advancement of Learning and Assessment. (1998). *Higher order thinking skills: Definition, teaching strategies, assessment.* Retrieved from http://www.cala.fsu.edu/files/higher_order_thinking_skills.pdf

Center for Media Literacy. (2008). *Literacy for the 21st century, 2nd Edition – An overview and orientation guide to media literacy education.* New York, NY: Author.

Center for Media Literacy. (2011). *Five key questions form foundation for media inquiry*. Retrieved from http://www.medialit.org/reading-room/five-key-questions-form-foundation-media-inquiry

Center for Media Literacy. (n.d.). *CML's five key concepts*. Retrieved from http://www.medialit.org/sites/default/files/14A_CCKQposter.pdf

Chambers, K., & Alexander, S. (2007). Media literacy as an educational method for addressing college women's body image issues. *Education, 127,* 490-497.

Chang, C., & Lui, E. Z. (2011). Exploring the media literacy of Taiwanese elementary school students. *The Asia-Pacific Education Researcher 20*(3), 604-611.

Christ, W. G. (2004). Assessment, media literacy standards, and higher education. *American Behavioral Scientist*, *48*(1), 92-96.

Considine, D., & Haley, G. (1999). *Visual messages: Integrating imagery into instruction*. (2nd edition). New York, NY: Teacher Ideas Press.

Coughlin, J. W., & Kalodner, C. (2006). Media literacy as a prevention intervention for college women at low- or high-risk for eating disorders. *Body Image: An International Journal of Research*, *3*, 35-43.

Creswell, J. W. (2009). Research design*: Quantitative, qualitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.

Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: SAGE Publications.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research*. Los Angeles, CA: SAGE Publications.

Davison, J. (1992). Theory in practice: Learning media concepts through practical work. In C. Bazalgette, E. Bevort, & J. Savino (Eds.), *New directions: Media education worldwide* (pp. 26-30). London, England: British Film Institute.

De Boer, C., & Brennecke, S. (2003). *Media en publiek: Theorieën over media-impact.* Amsterdam, the Netherlands: Uitgeverij Boom.

Dewey, J. (1938). *Logic: The theory of inquiry*. New York, NY: Holt, Rinehart, and Winston.

Dezuanni, M. (n.d.). *Media education as a basic entitlement for all children and young people.*

Retrieved from http://www.manifestoformediaeducation.co.uk/2011/06/michaeldezuanni/

Dick, W., Carey, L., & Carey, J. O. (2009). *The systematic design of instruction*. Boston, MA:

Pearson/Allyn and Bacon.

Duffy, T., & Jonassen, D. (1992). *Constructivism and the technology of instruction: A*

conversation. Hillsdale, NJ: Lawrence Erlbaum Associates.

Duncan, B., D'Ippolito, J., Macpherson, C., & Wilson, C. (1998). *Mass media and popular*

culture. Toronto, ON: Harcourt.

Dunning, D., Heath, C., & Suls, J. M. (2004). Flawed self-assessment: Implications for

health, education, and the workplace. *Psychological Science in the Public Interest, 5*(3),

69-106.

Duran, R. L., Yousman, B., Walsh, K.M., & Longshore, M.A. (2008). Holistic media

education: An assessment of the effectiveness of a college course in media literacy.

Communication Quarterly, 56(1), 49-68.

EAVI. (2010). *Study on assessment criteria for media literacy levels.* Retrieved from

http://www.eavi.eu/joomla/images/stories/Publications/Study2_Assessment/mlstudy2/eav

i_study_on_assessment_criteria_for_media_literacy_levels_in_europe.pdf

EAVI. (2011). *Testing and refining criteria to assess media literacy levels in Europe*.

Retrieved from http://www.eavi.eu/joomla/images/stories/Publications/study_testing_

and_refining_ml_levels_in_europe.pdf

EMEDUS. (2014*). Reports drafted by UAB.* Retrieved from http://eumedus.com/index.php/

reports/reports-drafted-from-uab

Emerson, R. M., Fretz, R. I., & Shaw, L. L. (1995). *Writing ethnographic fieldnotes*. Chicago, IL: University of Chicago Press.

Ennis, R. H. (1989). Critical thinking and subject specificity: Clarification and needed research. *Educational Researcher, 18*(3), 4-10.

Ennis, R. H. (1993). Critical thinking assessment. *Theory Into Practice, 32*(3), 179-186.

Ertmer, P. A., & Newby, T. J. (1993). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly, 6*(4), 50-70.

European Commission. (2009). *Recommendation on media literacy in the digital environment for a more competitive audio-visual and content industry and an inclusive knowledge society.* Retrieved from http://ec.europa.eu/culture/media/literacy/docs/recom/c_2009_6464_en.pdf

Eurostat. (2009). *Benchmarking digital Europe.* Luxembourg: Office for Official Publications of the European Communities.

Evans, A. E., Dave, J., Tanner, A., Duhe, S., Condrasky, M., Wilson, D., . . . Evans, M. S. (2006). Changing the home nutrition and media literacy pilot intervention. *Family Communication Health, 29*(1), 43-54.

Fairburn, C. G., & Beglin, S. J. (1994). Assessment of eating disorders: Interview or self-report questionnaire? *International Journal of Eating Disorders, 16*, 363-370.

Fastrez, P. (2009). Evaluating media literacy as competences: What can we agree on? (PowerPoint slides). Retrieved from http://www.slideshare.net/pfastrez/evaluating-media-literacy-as-competences-what-can-we-agree-on

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education (*8th ed.). New York, NY: McGraw Hill Companies, Inc.

Freire, P. (1970). *Pedagogy of the oppressed.* New York, NY: Herder and Herder.

Freire, P. (2000). *Pedagogy of the oppressed (3rd ed.).* New York, NY: Continuum.

Fuller, H. A., Damico, A. M., & Rodgers, S. (2004). Impact of a health and media literacy curriculum on fourth-grade girls: A qualitative study. *Journal of Research in Childhood Education, 19*, 66-78.

Gagne, R., Briggs, L. & Wager, W. (1992). The events of instruction. In *Principles of Instructional Design* (4th Ed.). Fort Worth, TX: IIBJ College Publishers.

Gerbner, G., Gross, L., Morgan, M., & Signorielli, N. (1994). Growing up with television: The cultivation perspective. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (pp.17-42). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Gierl, M. J. (1997). Comparing cognitive representations of test developers and students on a mathematics test with Bloom's Taxonomy. *The Journal of Educational Research*, *91*(1), 26-32.

Hall, S. (1997). *Representation: Cultural Representations and Signifying Practices*. London, England: Sage.

Harter, S. (1986). *Manual: Self-perception profile for adolescents*. Denver, CO: University of Denver.

Healey, M. (2005). Linking research and teaching: exploring disciplinary spaces and the role of inquiry-based learning. In R. Barnett, (Ed.), *Reshaping the university: New relationships between research, scholarship and teaching* (pp. 67-78). New York, NY: McGraw Hill / Open University Press.

Higgins, J. W., & Begoray, D. (2012). Exploring the borderlands between media and health: Conceptualizing 'critical media health literacy'. *Journal of Media Literacy Education, 4*(2), 136-148.

Hobbs, R. (1998). The seven great debates in the media literacy movement. *Journal of Communication, 48*(2), 9-29.

Hobbs, R. (2005a). The state of media literacy education. *Journal of Communication, 55*(4), 865-871.

Hobbs, R. (2005b). Media literacy and the K-12 content areas. In G. Schwarz and P. Brown (Eds.), *Media literacy: Transforming curriculum and teaching* (pp. 74-99). National Society for the Study of Education, Yearbook 104. Malden, MA: Blackwell.

Hobbs, R. (2010). *Digital and media literacy: A plan of action*. Retrieved from http://www.knightcomm.org/wp-content/uploads/2010/12/Digital_and_Media_Literacy_A_Plan_of_Action.pdf

Hobbs, R. (2011). What a difference ten years can make: Research possibilities for the future of media literacy education. *Journal of Media Literacy Education* 3(1), 29-31.

Hobbs, R., & Frost, R. (1998). Instructional practices in media literacy education and their impact on students' learning. *The New Jersey Journal of Communication, 6*(2), 123-148.

Hobbs, R., & Frost, R. (2003). Measuring the acquisition of media literacy skills. *Reading Research Quarterly, 38,* 330-356.

Hobbs, R., & Jensen, A., (2009). The past, present, and future of media literacy education. *Journal of Media Literacy Education, 1*(1), 1-11.

Inan, T., & Temur, T. (2012). Examining media literacy levels of prospective teachers. *International Electronic Journal of Elementary Education, 4*(2), 269-285.

Irving, L. M., & Berel, S. R. (2001). Comparison of media-literacy programs to strengthen college women's resistance to media images. *Psychology of Women Quarterly, 25*, 103-111.

Irving, L. M., DuPen, J., & Berel, S. A. (1998). A media literacy program for high school females. *The Journal of Treatment and Prevention, 6*, 119-131.

Ithaca College. (2012). *What is project look sharp?* Retrieved from http://www.ithaca.edu/looksharp/

Jensen, K. B., & Rosengren, K. E. (1990). Five traditions in search of the audience. *European Journal of Communication,* 5(2-3): 207-238.

Jeong, S. H., Cho, H., & Hwang, Y. (2012). Media literacy interventions: A meta-analytic review. *Journal of Communication, 62*(3), 454-472.

Jonassen, D. H. (1991). Objectivism versus constructivism: Do we need a new philosophical paradigm? *Educational Technology: Research and Development, 39,* 5-14.

Jonassen, D., & Tessmer, M. (1996/97). An outcomes based taxonomy for instructional systems design, evaluations, and research. *Training Research Journal, 2*, 11-46.

Kegan, D. M. (1992). Teacher growth. *Review of educational research, 62,* 129-169.

Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory Into Practice, 41*(4), 212-218.

Kress, G. (1992). Media literacy as cultural technology in the age of transcultural media. In C. Bazalgette, E. Bevort, & J. Savino (Eds.), *New directions: Media education worldwide* (pp. 190–202). London, England: British Film Institute.

Kropotkin, P. (1885). What geography ought to be. *The Nineteenth Century*, *18*, 940-956.

Kubey, R. (2003). Why U.S. media education lags behind the rest of the English-speaking world. *Television New Media, 4*(4), 351-370.

Kuhn, D., Black, J., Keselman, A., & Kaplan, D. (2000). The development of cognitive skills to support inquiry learning. *Cognition and Instruction, 18*(4), 495-523. Retrieved from http://www.tandf.co.uk/journals/HCGI

Kupersmidt, J. B., Scull, T. M., & Austin, E. W. (2010). Media literacy education for elementary school substance use prevention: Randomized efficacy study of media detective. *Pediatrics, 126*(3), 525-531.

Kusel, A. B. (1999). Primary prevention of eating disorders through media literacy training of girls. *Dissertation Abstracts International, 60*(4), 1859B.

Lane, S. (2010). *Performance assessment: The state of the art.* (SCOPE Student Performance Assessment Series). Stanford, CA: Stanford University, Stanford Center for Opportunity Policy in Education.

Lealand, G. (2009). A success story: Media teaching in New Zealand. In C. K. Cheung (Ed.), *Media Education in Asia* (pp. 19-30). Dordrecht, the Netherlands: Springer. doi:10.1007/978-1-4020-9529-0_5

Leighton, J. P. (2011). A cognitive model for the assessment of higher order thinking in students. In G. Shraw & D. H. Robinson (Eds.), *Assessment of higher order thinking skills* (pp. 151-184). Austin, Texas: Information Age Publishing, Inc.

Lewis, M., & Hill, A. (1998). Food advertising on British children's television: A content analysis and experimental study with nine-year olds. *International Journal of Obesity, 22*, 206-214.

Lewis, A., & Smith, D. (1993). Defining higher order thinking. *Theory Into Practice, 32*(3), 131-137.

Livingstone, S. (2003). *The changing nature and uses of media literacy.* (Media@LSE electronic working papers, 4). London, England: London School of Economics and Political Science.

Livingstone, S., Couvering, E., & Thumim, N. (2008). *Adult media literacy – A review of the research literature on behalf of Ofcom.* Retrieved from http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/aml.pdf

Livingstone, S., & Thumim, N. (2003). *Assessing the media literacy of UK adults: A review of the academic literature.* Retrieved from http://eprints.lse.ac.uk/21673/1/Assessing_the_media_literacy_of_UK_adults.pdf

Martens, H. (2010). Evaluating media literacy education: Concepts, theories and future directions. *Journal of Media Literacy Education, 2,* 1-22.

Maryland State Department of Education. (2003). *Assignment: Media literacy*. Retrieved from http://www.marylandpublicschools.org/MSDE/programs/medialit/mediagettingstarted/getting_started

Masterman, L. (1985). *Teaching the media*. London, England: Comedia.

McCombs, M. E., & Shaw, D. L. (1972). The agenda-setting function of mass media. *The Public Opinion Quarterly, 36*(2), 176-187.

McLuhan, M., & Fiore, Q. (1967). *The medium is the massage: An inventory of effects*. New York, NY: Random House.

McQuail, D. (2000). *Mass communication theory.* London, England: SAGE publications.

Media Smarts. (n.d). *Media education in Canada: An introduction.* Retrieved from

   http://mediasmarts.ca/digital-media-literacy-fundamentals/media-literacy-

   fundamentals#canada

Media Smarts. (2013). *Media education in Ontario.* Retrieved from

   http://mediasmarts.ca/teacher-resources/media-education-outcomes-province/ontario

Mediawijzer.net. (2012). *Competence model explained.* Retrieved from

   http://www.mediawijzer.net/wp-content/uploads/ENG-competencemodel-explained.pdf

Moody, K. (1999). *The children of Telstar: Early experiments in school television production.*

   New York, NY: Vantage Press.

National Association for Media Literacy Education Association (2007). *Core principles of media*

   literacy education in the United States. Retrieved from http://namle.net/wp-

   content/uploads/2009/09/NAMLE-CPMLE-w-questions2.pdf

Nathanson, A. I., & Cantor, J. (2000). Reducing the aggression-promoting effect of violent

   cartoons by increasing children's fictional involvement with the victim: A study of active

   mediation. *Journal of Broadcasting & Electronic Media, 44*, 125-142.

National Research Council. (2001). *Knowing what students know: The science*

   and design of educational assessment. Washington, D.C.: National Academy Press.

New Zealand Qualification Authority. (n.d.). *Understanding NCEA*. Retrieved from

   http://www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/understanding-ncea/

Nitko, A. J., & Brookhart, S. M. (2011). *Educational assessment of students* (6th ed.).

   Boston, MA: Pearson.

O'Callaghan, F. V., Callan, V. J., & Baglioni, A. (1999). Cigarette use by adolescents: Attitude-

   behavior relationships. *Substance Use & Misuse, 34*, 455-468.

OECD. (2009). *PIAAC problem solving in technology-rich environments – A conceptual framework.* (OECD Education Working Papers No. 36). Paris, France: OECD Publishing. doi: 10.1787/220262483674

Ofcom. (2008). *Media literacy audit: Report on UK adults' media literacy.* London, England: Ofcom.

Ontario Association for Media Literacy. (2012). *What is media literacy?* Retrieved from http://www.aml.ca/category/about-us/what-is-media-literacy/

Ontario Ministry of Education. (2006). *The Ontario curriculum grades 1-8: Language.* Retrieved from http://www.edu.gov.on.ca/eng/curriculum/elementary/language18currb.pdf

P21. (2011). *Media Literacy*. Retrieved from http://www.p21.org/overview/skills-framework/349

Patton, M. Q. (2002). *Qualitative research and evaluation methods*. Thousand Oaks, CA: Sage Publications.

Piette, J., & Giroux, L. (1998). The theoretical foundations of media education programs. In R. Kubey (Ed.), *Media literacy in the information age* (pp. 89-134). New Brunswick, NJ: Transaction.

Pinkleton, B. E., Austin, E. W., Cohen, M., Miller, A., & Fitzgerald, E. (2007). A statewide evaluation of the effectiveness of media literacy training to prevent tobacco use among adolescents. *Health Communication, 21*(1), 23-34.

Postman, N., & Weingartner, N. (1969). *Teaching as a subversive activity*. New York, NY: Dell.

Potter, W. J. (2013). Review of Literature on Media Literacy. *Sociology Compass*, *7*(6), 417-435.

Primack, B. A., Gold, M. A., Switzer, G. E., Hobbs, R., Land, S. R., & Fine M. J. (2006). Development and validation of a smoking media literacy scale for adolescents**.** *Archives of Pediatric and Adolescent Medicine, 160*(4), 369-374.

Primack, B. A., Sidani, J., Carroll, M. V., & Fine, M. J. (2009). Associations between smoking and media literacy in college students. *Journal of Health Communication, 14*(6), 541-555.

Pungente, J. J., & O'Malley, M. (1999). *More than meets the eye: Watching television watching us*. New York, NY: McClelland & Stewart.

Queensland Studies Authority. (2007). *Film, television and new media guide.* Retrieved from http://www.qsa.qld.edu.au/downloads/senior/snr_ftnm_05_guide.pdf

Quellmalz, E. S. (1985). Developing reasoning skills. In J. R. Baron & R. J. Sternberg (Eds.), *Teaching thinking skills: Theory and practice* (pp. 86-105). New York, NY: Freeman.

Quin, R., & McMahon, B. (1995). Evaluating standards in media education. *Canadian Journal of Educational Communication, 22*(1), 15-25.

Rabak-Wagener, J., Eickhoff-Shemek, J., & Kelly-Vance, L. (1998). The effect of media analysis on attitudes and behaviors regarding body image among college students. *Journal of American College Health, 47*, 29-35.

Reichert, T. M., LaTour, S., Lambiase, J. I., & Adkins, M. (2007). A test of media literacy effects and sexual objectification in advertising. *Journal of Current Issues & Research in Advertising, 29*(1), 81-92.

Resnick, L. B. (1987). *Education and learning to think.* Washington, DC: National Academy Press.

Rogow, F. (2011). Ask, don't tell: Pedagogy for media literacy education in the next decade. *Journal of Media Literacy Education, 3*(1), 16-22.

Rosenbaum, J. E. (2007). *Measuring media literacy. Youngsters, television and democracy*. Nijmegen, the Netherlands: Radboud Universiteit.

Rossman, G. B., & Rallis, S. F. (2012). *Learning in the Field: An Introduction to Qualitative Research (3rd ed.).* Thousand Oaks, CA: Sage.

Russ-Eft, D., & Preskill, H. (2009*). Evaluation in organizations: A systematic approach to enhancing learning, performance, and change*. New York, NY: Basic Books.

Scharrer, E. (2002). Making a case for media literacy in the curriculum: Outcomes and assessment. *Journal of Adolescent & Adult Literacy, 46*(4), 354-358.

Scharrer, E. (2005). Sixth graders take on television: Media literacy and critical attitudes about television violence. *Communication Research Reports, 24*, 325-333.

Scharrer, E. (2006). "I noticed more violence:" The effects of a media literacy program on critical attitudes toward media violence. *Journal of Mass Media Ethics, 21*, 70-87.

Scheibe, C. L., & Rogow, F. (2008). *Basic ways to integrate media literacy and critical thinking into any curriculum.* Retrieved from http://www.ithaca.edu/looksharp/12BasicWays.pdf

Scheibe, C. L., & Rogow, F. (2011). *The teacher's guide to media literacy: Critical thinking in a multimedia world.* Thousand Oaks, CA: Corwin Press.

Schraw, G., McCrudden, M. T., Lehman, S., & Hoffman, B. (2011). An overview of thinking skills. In G. Shraw & D. H. Robinson (Eds.), *Assessment of higher order thinking skills* (pp. 19-46). Austin, TX: Information Age Publishing, Inc.

Schraw, G. & Robinson, D. H. (2011) Conceptualizing and assessing higher order thinking skills. In G. Shraw & D. H. Robinson (Eds.), *Assessment of higher order thinking skills* (pp. 1-18). Austin, TX: Information Age Publishing, Inc.

Schwarz, F., Huveneers, S., van Schoonhoven, B., Besselink, S., Hilberdink, W., Wissink, B.,

    . . . Wiebenga, F. (2011). *Meten van mediawijsheid*. Retrieved from http://typo.

    kennisnet.nl/fileadmin/kennisnet/Mediawijzer.net/meten_van_mediawijsheid.pdf

Stiggins, R. (2004). New assessment beliefs for a new school mission. *The Phi Delta Kappan,*

    86(1), 22-27.

Stunkard, A., Sorenson, T., & Schlusinger, F. (1983). Use of the Danish adoption register for the

    study of obesity and thinness. In S. Kety, L. P. Rowland, R. L. Sidman, & S. W.

    Matthysse (Eds.), *The genetics of neurological and psychiatric disorders* (pp. 155-120).

    New York, NY: Raven.

Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and*

    quantitative approaches. Thousand Oaks, CA: Sage.

Thoman, E. (n.d.). *Skills & strategies for media education*. Retrieved from

    http://www.medialit.org/reading-room/skills-strategies-media-education

Tornero, J. M. P., & Varis, T. (2010). *Media literacy and new humanism*. Moscow, Russia:

    UNESCO/International Institute of Technology for Education.

Tyner, K. (1998). *Literacy in a digital world: Teaching and learning in the age of*

    information. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Unger, J. B., Rohrbach, L. A., Howard, K. A., Boley Cruz, T., Johnson, C.A., & Chen, X.

    (1999). Attitudes toward anti-tobacco policy among California youth: Associations with

    smoking status, psychosocial variables and advocacy actions. *Health Education*

    Research, *14,* 751-763. doi: 10.1093/her/14.6.751

Victoria Curriculum and Assessment Authority. (2011). *VCE media assessment handbook 2012 -*

    2016. Retrieved from http://www.vcaa.vic.edu.au/Documents/vce/media/MediaHbook

    2012-2016.doc

Vooijs, M. W., & Van Der Voort, T. H. A. (1993). Teaching children to evaluate television

    violence critically: The impact of a Dutch schools television project. *Journal of*

    Educational Television, 19, 139-152.

Vraga, E. K., Tully, M., & Rojas, H. (2009). Media literacy training reduces perception of

    bias. *Newspaper Research Journal, 30*(4), 68-81.

Vygotsky, L. (1962). *Thought and language.* Cambridge, MA: MIT Press.

Vygotsky, L. (1978). *Mind and society.* Cambridge, MA: Harvard University Press.

Wade, T. D., Davidson, S., & O'Dea, J. A. (2003). A preliminary controlled evaluation of a

    school-based media literacy program and self-esteem program for reducing eating

    disorder risk factors. *International Journal of Eating Disorders, 33*, 371-383.

Wartella, E., & Reeves, B. (2003). Historical trends in research on children and the

    media: 1900-1960. In J. Turow & A.L. Kavanaugh (Eds.), *The wired homestead: An*

    MIT press sourcebook on the Internet and the family (pp. 53-72). Cambridge, MA: MIT

    Press.

Wheeler, D. A. (2009). *The effectiveness of the Dove Evolution Film as a one-shot media literacy*

    treatment. Retrieved from http://gradworks.umi.com/33/57/3357912.html

Worsnop, C. M. (1996). *Assessing media work.* Mississauga, Ontario: Wright

    Communications.

Wulff, S. (1997). Media literacy. In W. G. Christ (Ed.), *Media education assessment*

    handbook (pp. 123-142). Mahwah, NJ: Erlbaum.

Wyatt-Smith, C., & Cumming, J. (2009). *Educational assessment in the 21st century*. Dordrecht,

    the Netherlands: Springer.

Zacchetti, M. (2011, March). *An European approach to media literacy*. A paper presented at

a national conference "Literacia, Media e Cidadania", Braga, Portugal. Retrieved from

http://www.lasics.uminho.pt/ojs/index.php/lmc/article/viewFile/524/493

Appendix A

IRB Approval

Research Phase I: IRB Approval
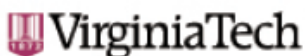
VirginiaTech

Office of Research Compliance
Institutational Review Board
North End Center, Suite 4120, Virginia Tech
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-4606 Fax 540/231-0959
email irb@vt.edu
website http://www.irb.vt.edu

MEMORANDUM

DATE:	September 13, 2013
TO:	Barbara B Lockee, Evelien A Schilder
FROM:	Virginia Tech Institutional Review Board (FWA00000572, expires April 25, 2018)
PROTOCOL TITLE:	Media Literacy Professionals’ and Scholars’ Perceptions of Media Literacy Assessment
IRB NUMBER:	13-792

Effective September 12, 2013, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As:	Expedited, under 45 CFR 46.110 category(ies) 6,7
Protocol Approval Date:	September 12, 2013
Protocol Expiration Date:	September 11, 2014
Continuing Review Due Date*:	August 28, 2014

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

———— *Invent the Future* ————

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
An equal opportunity, affirmative action institution

Date*	OSP Number	Sponsor	Grant Comparison Conducted?

* Date this proposal number was compared, assessed as not requiring comparison, or comparison information was revised.

If this IRB protocol is to cover any other grant proposals, please contact the IRB office (irbadmin@vt.edu) immediately.

Research Phase II: IRB Approval

VirginiaTech

Office of Research Compliance
Institutational Review Board
North End Center, Suite 4120, Virginia Tech
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-4606 Fax 540/231-0959
email irb@vt.edu
website http://www.irb.vt.edu

MEMORANDUM

DATE: December 16, 2013

TO: Barbara B Lockee, Evelien A Schilder

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires April 25, 2018)

PROTOCOL TITLE:

IRB NUMBER: 13-1103

Effective December 16, 2013, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As: Expedited, under 45 CFR 46.110 category(ies) 6,7
Protocol Approval Date: December 16, 2013
Protocol Expiration Date: December 15, 2014
Continuing Review Due Date*: December 1, 2014
*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

——————— *Invent the Future* ———————

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
An equal opportunity, affirmative action institution

Date*	OSP Number	Sponsor	Grant Comparison Conducted?

* Date this proposal number was compared, assessed as not requiring comparison, or comparison information was revised.

If this IRB protocol is to cover any other grant proposals, please contact the IRB office (irbadmin@vt.edu) immediately.

Research Phase II: IRB Amendment Approval

WVirginiaTech

Office of Research Compliance
Institutational Review Board
North End Center, Suite 4120, Virginia Tech
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-4606 Fax 540/231-0959
email irb@vt.edu
website http://www.irb.vt.edu

MEMORANDUM

DATE: January 23, 2014

TO: Barbara B Lockee, Evelien A Schilder

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires April 25, 2018)

PROTOCOL TITLE:

IRB NUMBER: 13-1103

Effective January 22, 2014, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the Amendment request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As: Expedited, under 45 CFR 46.110 category(ies) 6,7
Protocol Approval Date: December 16, 2013
Protocol Expiration Date: December 15, 2014
Continuing Review Due Date*: December 1, 2014
*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

Invent the Future

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
An equal opportunity, affirmative action institution

Date*	OSP Number	Sponsor	Grant Comparison Conducted?

* Date this proposal number was compared, assessed as not requiring comparison, or comparison information was revised.

If this IRB protocol is to cover any other grant proposals, please contact the IRB office (irbadmin@vt.edu) immediately.

Appendix B

Expert Reviewer Consent Form Phase I

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Consent for Participants in Research Projects Involving Human Subjects
CONSENT FORM

IRB Study # 13792
Title of Study: Media Literacy Professionals' and Scholars' Perceptions of Media Literacy Assessment
Investigators:
Dr. Barbara Lockee   lockeebb@vt.edu
Evelien Schilder   evelien@vt.edu

Purpose of this Research/Project
This study will address media literacy assessment. The purpose of this exploratory sequential design will be to first explore the views of media literacy scholars and professionals on media literacy assessment with the intent of using this information to develop a quantitative survey to validate and extend the qualitative findings with a larger sample. The first phase of the study will be a qualitative exploration of media literacy outcomes, assessment practices, existing challenges and possible solutions to these challenges. In this phase, interview data will be collected from a purposeful sample of eight media literacy scholars and professionals. From this initial exploration, the qualitative findings will be used to develop measures that can be administered to a large sample. In the quantitative phase, survey data will be collected from a sample of media literacy professionals and scholars from all around the world to validate and extend the qualitative findings and to investigate whether results vary demographically.

Procedures
If you agree to be in this study, you will serve as an expert reviewer of my interview protocol. The interview protocol includes questions media literacy outcomes, assessment practices, existing challenges and possible solutions to these challenges. The expert reviewers will examine the interview protocol based on its clarity and alignment with the research questions. The expert reviewer will provide written feedback regarding the clarity and alignment of the interview protocol with the research questions and they will also be given the opportunity for open oral feedback. The oral feedback will take place as an approximately 15 minute Skype conversation at a mutually convenient time and will be audio-recorded.

Risks
There are minimal risks to participation in this study. Risks to participants are no greater than the risks associated with normal conversation. In addition, you have the right to withdraw from participation at any time by notifying the researcher in writing or in person of your desire to withdraw.

Benefits
There are no direct benefits to you for participation in this study. No promise or guarantee of benefits has been made to encourage you to participate.

Extent of Anonymity and Confidentiality
The researcher will keep all data collected confidential. While information gathered from the study may be used in reports, presentations, and articles in professional journals, participant's name or any other identifying information will not be used. Any identifying information will be changed so that the data cannot be connected to the individual; pseudonyms will be used in place of actual names. Every effort will be made to ensure no identifying characteristics of the participant will be revealed in any reporting of the data.
The researcher will transcribe the audio recording for further analysis. Only the researcher will have access to the audio recording. The audio-recorded interview will be destroyed after reporting of results is complete. All other study materials will be retained for a period of not more than three years in secure locations. When all project reporting is complete, the data will be destroyed.
The Institutional Review Board (IRB) may view this study's collected data for auditing purposes.

Compensation
Taking part in this study is voluntary; the participant will not be compensated for participating in this study.

Freedom to Withdraw
The participant is free to withdraw from this study at any time without penalty. You may choose to not respond to any research questions that you choose. There may be circumstances under which the investigators may

determine that you should not continue to be involved in the study.

Should I have any pertinent questions about this research or its conduct and research subjects' rights, I may contact:

Investigators	E-mail
Dr. Barbara Lockee	lockeebb@vt.edu
Evelien Schilder	evelien@vt.edu

If you have questions about your *rights as a participant*, please contact:
Dr. David Moore
Chair Virginia Tech Institutional Review Board for the Protection of Human Subjects
Telephone: (540) 231-4991
Email: moored@vt.edu

Subject's Responsibilities

○ I voluntarily agree to participate as an expert reviewer. I have the following responsibilities: to participate in one approximately 15 minute audio-recorded interview and to provide written feedback regarding the interview protocol.

○ I do not agree to participate in this study.

Subject's Permission

○ I have read the Consent Form and conditions of this project. I have had all my questions answered. By signing this forms and scheduling a time for the Skype conversation, I hereby acknowledge the above and give my voluntary consent.

○ I have not read the Consent Form and the conditions of this project and/or do not give my voluntary consent.

Please type your name and today's date below

Appendix C

Expert Review Rubric: Phase I

Expert Review Rubric/Protocol for written feedback

Reviewer name: _____ Date: _____

In the first section, please review the interview protocol. Then review the rubric below and provide comments regarding the alignment and clarity of the individual research questions with the interview questions.

Research questions	Interview questions	Comments about alignment of individual research questions with interview questions	Comments about clarity of the individual research questions and interview questions
None (questions to better understand the background of the interviewee)	1: How long have you been teaching or researching media literacy? 2: What topics do you cover in your classes or research on media literacy?	Click here to add text	Click here to add text
RQ1: Which outcomes do media literacy professionals and scholars attempt to assess?	3: What do you think is the goal of teaching media literacy? a. What are the skills or knowledge a media literate person should have? b. What should be the outcomes of media literacy education? c. What is it that you try to assess? d. Could you please provide details about that?	Click here to add text	Click here to add text
RQ2: How do media literacy professionals and scholars assess these outcomes?	4: What role does assessment play in your work on media literacy? 5: How do you assess media literacy outcomes? a. Could you tell me more about that? b. Could you please provide examples of how you have assessed media literacy in the past? c. (if not having assessed media literacy personally) How do you think media literacy scholars and professionals should assess media literacy outcomes?	Click here to add text	Click here to add text

RQ3: Which challenges do media literacy professionals and scholars experience regarding media literacy assessment?	6. What are problems or challenges you have encountered when trying to assess media literacy skills?
	    a. Could you tell me more details about the problems you have encountered?
	    b. (if not personally having encountered any problems or challenges) What could be challenging about assessing media literacy skills?
		Click here to add text	Click here to add text

RQ4: How do media literacy professionals and scholars believe these challenges can be overcome?	7. How do you think these problems or challenges could be overcome?
	    a. Could you tell me more about that?
	    b. Could you tell me how you solved any problems you have encountered regarding media literacy assessment?
		Click here to add text	Click here to add text

RQ5: How do responses to these questions differ demographically?	None (this question will be answered with the quantitative survey)	Click here to add text	Click here to add text

Please fill out the rubric regarding other aspects of the research questions and interview questions.

	0 points	1 point	2 points	Score	Comments about score
Bias	The interview questions are strongly biased towards a certain answer or viewpoint.	Certain interview questions are somewhat biased towards a certain answer or viewpoint.	All interview questions do not bias or lead the interviewee towards a certain answer or viewpoint.	Click here to add text	Click here to add text
Completeness	The first four research questions cannot be answered at all using the current interview questions.	Some extra interview questions are needed to answer the first four research questions.	The first four research questions can be completely answered using the current interview questions.	Click here to add text	Click here to add text

Type of questions	Most or all questions are close-ended and do not allow for in-depth answers on the topic at hand.	Some questions are close-ended and do not allow for in-depth answers on the topic at hand.	All questions are open-ended and do not allow for in-depth answers on the topic at hand.	Click here to add text	Click here to add text
Order	The interview questions are not logically ordered.	Some interview questions may have to be realigned in order to structure the interview logically.	All interview questions are logically ordered.	Click here to add text	Click here to add text
Privacy	Many or all of the interview questions are not respectful and may invade the interviewee's privacy.	Some of the interview questions are not respectful to ask and may invade the interviewee's privacy.	All interview questions are polite and respectful.	Click here to add text	Click here to add text
Time	The time set for the interview (1 hour) is much too long or too short to answer all interview questions.	The time set for the interview (1 hour) may be a little too long or too short to answer all interview questions.	The time set for the interview (1 hour) is perfect to answer all interview questions.	Click here to add text	Click here to add text

Please provide any additional comments regarding the research and interview questions that you felt were not addressed:

_____

_____

_____

Appendix D

Interview Protocol

Interview Protocol for study on
Media Literacy Assessment

Interviewer: _____

Participant pseudonym: _____

Time: _____

Date: _____

Consent form
The participant has received an electronic copy of the consent form and signed it before
scheduling the interview (see attached file).

Introduction
Overview of project: I am conducting a research study entitled "Media Literacy Professionals'
and Scholars' Perceptions of Media Literacy Assessment: A Mixed Methods Study." This study
will address media literacy assessment. The purpose of this study is to explore how media
literacy professionals and scholars view media literacy assessment, and then use this information
to develop a quantitative survey for a larger group of subjects. The first phase of the study is a
qualitative exploration and collection of data from eight media literacy professionals and
scholars. In the second, quantitative phase, data will be collected from media literacy
professionals and scholars from all around the world.

Begin audio recording
- Ask the participant if he or she has any questions before the interview commences.
- Inform the participant that the study will begin when starting the recording.

Begin with Interview Questions:
1. How did you become interested in teaching or researching media literacy?
2. What grade level and subject areas do you focus on in your teaching or research on media
   literacy?
3. What do you think is the goal of teaching media literacy?
   a. What are the skills or knowledge a media literate person should have?
   b. What are the outcomes of media literacy education?
   c. What is it that you try to assess?

       d. Could you please provide more detail about that?

4. How do you assess media literacy outcomes?
       a. Could you tell me more about that?
       b. Could you please provide examples of how you have assessed media literacy in the past (summative, formative or memorable examples)?
       c. (if not having assessed media literacy personally) How do you think media literacy scholars and professionals should assess media literacy outcomes?
       d. (if not having assessed media literacy personally) Why have you not personally assessed media literacy outcomes?

5. What are challenges you have encountered when trying to assess media literacy outcomes?
       a. Could you tell me an example of a memorable challenge you have encountered?
       b. (if not personally having encountered any challenges) What could be challenging about assessing media literacy outcomes?
       c. (it not personally having encountered any challenges) What has your experience with media literacy assessment been like?

6. Could you tell me how you solved any challenges you have encountered regarding media literacy assessment?
       a. How do you think these challenges could be overcome?
       b. Could you tell me more about that?
       c. Do you have any recommendations for media literacy assessment in general?

Stop recording and thank participant for participating.

Appendix E

Interview Consent Form

IRB Consent

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Consent for Participants in Research Projects Involving Human Subjects
CONSENT FORM

IRB Study # 13792
Title of Study: Media Literacy Professionals' and Scholars' Perceptions of Media Literacy Assessment
Investigators:
Dr. Barbara Lockee   lockeebb@vt.edu
Evelien Schilder   evelien@vt.edu

Purpose of this Research/Project
This study will address media literacy assessment. The purpose of this exploratory sequential design will be to first explore the views of media literacy scholars and professionals on media literacy assessment with the intent of using this information to develop a quantitative survey to validate and extend the qualitative findings with a larger sample. The first phase of the study will be a qualitative exploration of media literacy outcomes, assessment practices, existing challenges and possible solutions to these challenges. In this phase, interview data will be collected from a purposeful sample of eight media literacy scholars and professionals. From this initial exploration, the qualitative findings will be used to develop measures that can be administered to a large sample. In the quantitative phase, survey data will be collected from a sample of media literacy professionals and scholars from all around the world to validate and extend the qualitative findings and to investigate whether results vary demographically.

Procedures
If you agree to be in this study, I will conduct an online Skype interview with you at a mutually convenient time. The interview will include questions media literacy outcomes, assessment practices, existing challenges and possible solutions to these challenges. The interview will take approximately 60 minutes to complete and will be audio-recorded.

Risks
There are minimal risks to participation in this study. Risks to participants are no greater than the risks associated with normal conversation. In addition, you have the right to withdraw from participation at any time by notifying the researcher in writing or in person of your desire to withdraw.

Benefits
There are no direct benefits to you for participation in this study. No promise or guarantee of benefits has been made to encourage you to participate.

Extent of Anonymity and Confidentiality
The researcher will keep all data collected confidential. While information gathered from the study may be used in reports, presentations, and articles in professional journals, the participant's name or any other identifying information will not be used. Any identifying information will be changed so that the data cannot be connected to the individual; pseudonyms will be used in place of actual names. Every effort will be made to ensure no identifying characteristics of the participant will be revealed in any reporting of the data.
The researcher will transcribe the audio recording for further analysis. Only the researcher will have access to the audio recording. The audio-recorded interview will be destroyed after reporting of results is complete. All other study materials will be retained for a period of not more than three years in secure locations. When all project reporting is complete, the data will be destroyed.
The Institutional Review Board (IRB) may view this study's collected data for auditing purposes.

Compensation
Taking part in this study is voluntary; the participant will not be compensated for participating in this study.

Freedom to Withdraw
The participant is free to withdraw from this study at any time without penalty. You may choose to not respond to any research questions that you choose. There may be circumstances under which the investigators may determine that you should not continue to be involved in the study.

Should I have any pertinent questions about this research or its conduct and research subjects' rights, I may

contact:

Investigators	E-mail
Dr. Barbara Lockee	lockeebb@vt.edu
Evelien Schilder	evelien@vt.edu

If you have questions about your *rights as a participant*, please contact:
Dr. David Moore
Chair Virginia Tech Institutional Review Board for the Protection of Human Subjects
Telephone: (540) 231-4991
Email: moored@vt.edu

Subject's Responsibilities

○ I voluntarily agree to participate in the interview. I have the following responsibilities: to participate in one approximately 60 minute audio-recorded interview.

○ I do not agree to participate in the interview.

Subject's Permission

○ I have read the Consent Form and conditions of this project. I have had all my questions answered. By signing this forms and scheduling a time for the interview, I hereby acknowledge the above and give my voluntary consent.

○ I have not read the Consent Form and the conditions of this project and/or do not give my voluntary consent.

Please type your name and today's date below

Appendix F

Quantitative Survey

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Consent for Participants in Research Projects Involving Human Subjects

Media Literacy Assessment Study

You are invited to participate in a study about media literacy assessment. The purpose of this survey is to gain insight in media literacy teachers', scholars', and other professionals' perceptions about media literacy outcomes, media literacy assessment practices, existing challenges, and recommendations to overcome any media literacy assessment challenges. While in this survey the term media literacy is used, we recognize that in other countries than the United States and Canada it might rather be known as media education or media studies.

This survey will take approximately 20-30 minutes to complete. Your return of this survey is implied consent. There are no direct benefits for participation in this study. No promise or guarantee of benefits has been made to encourage you to participate. Any information obtained in this study that can be identified with you will remain confidential and will not be disclosed. You are free to withdraw from this study at any time without penalty. You may choose to not respond to any research questions that you choose.

Sincerely,
Evelien Schilder
Dr. Barbara Lockee

The next questions are related to your background and the way you are involved with media literacy education.

Again, while the term media literacy is used in this survey, we recognize that in other countries it might rather be referred to as media education or media studies.

Q1   In which country do you reside?

Q2   I am involved with media literacy (media education, media studies) as a:

	Please check all that apply	If yes, for how many years?
Teacher	☐	
Researcher	☐	
Developer of media literacy instruction materials	☐	
Other role(s), please describe	☐	

Q3   Your work on media literacy education is related to (please check all that apply):

☐ Children less than 3 years old	☐ College, undergraduate students
☐ Nursery school or preschool students	☐ Graduate or doctoral students
☐ Kindergarten students	☐ Teacher education
☐ Elementary school students: grades 1-4	☐ Parents education
☐ Elementary school students: grades 5-8	☐ Other group(s), please describe
☐ High school students: grades 9-12	

Q4   My teaching, lesson materials, or research on media literacy is (please check all that apply):

☐ Integrated in a specific subject area(s)

☐ Taught or studied as a separate subject area

Q5 My work on media literacy education is related to the following (subject) areas (please check all that apply):

- [ ] Health Education
- [ ] Social Studies
- [ ] Language Arts
- [ ] Art Education
- [ ] Vocational Education and Communications
- [ ] Teacher/parent training
- [ ] Other(s), please describe

The next questions are related to your perceptions about media literacy goals and outcomes.

Q6 To what extent are these media literacy goals important to you?

	Not at all Important	Somewhat important	Very Important	Extremely Important
I want to prepare students to successfully participate in their personal, civic, and professional lives	○	○	○	○
I want students to enjoy producing media	○	○	○	○
I want to reduce the risk of unhealthy behaviors supported in media messages	○	○	○	○
I want my students to become critically autonomous, to give them a sense of agency or empowerment.	○	○	○	○
I want students to have pleasure in exploring meaning and asking questions about media messages	○	○	○	○
I want to help reduce the harmful effects of media	○	○	○	○
I want my students to have confidence in expressing themselves	○	○	○	○
Other(s), please describe	○	○	○	○

Q7 In the work you do related to media literacy, how well defined are media literacy outcomes?

- ○ I do not specify outcomes
- ○ I do specify outcomes, but they are broad and open
- ○ My outcomes are very explicitly defined

Q8 You mentioned that you do not explicitly define your outcomes. Are there any specific reasons for that?

- [ ] I do not know how to create them
- [ ] I want to leave the classroom open for other experiences to happen rather than teaching towards specific outcomes
- [ ] I believe in personalized learning, and therefore do not want to set outcomes for the whole group of students
- [ ] Other(s), please describe

Q8 will only be shown if the respondent answers "I do not specify outcomes" in Q7"

Q9 You mention that you use specified outcomes. Who specifies these outcomes?

- [ ] I specify the outcomes myself
- [ ] The media literacy materials that I am using in my lessons have specified outcomes
- [ ] The school or organization in which I work specifies the outcomes
- [ ] My state or country specifies the outcomes
- [ ] Other(s), please describe

Q9 will only be shown if the respondent answers "I do specify outcomes, but they are broad and open" or "my outcomes are very explicitly defined".

Q10 To what extent are the following skills and attitudes important in your work on media literacy?

	Not at all Important	Slightly important	Very Important	Extremely Important
Accessing, using, and experiencing a wide variety of media messages	○	○	○	○
Critically analyzing and evaluating media messages	○	○	○	○
Creating and producing media messages	○	○	○	○
Developing technological or practical skills	○	○	○	○
Reflecting on students' own learning	○	○	○	○
To become more open minded, flexible, and empathetic	○	○	○	○
Collaborating with other students	○	○	○	○
Other(s), please describe	○	○	○	○

The next questions relate to how you assess media literacy.

What role does assessment play in your work?

Q11

	Strongly Disagree	Disagree	Agree	Strongly Agree
Assessment does not play a large role in my work (teaching and student interactions are more important to me)	○	○	○	○
I use assessment to motivate my students	○	○	○	○
I assess media literacy outcomes simply because assessment is inevitable in this world	○	○	○	○
Assessment is critical in my work	○	○	○	○
Other, please describe	○	○	○	○

Which of the following assessment methods have you used in your media literacy education or research?

Q12

	Please check all that apply	If yes, could you please explain how you have used this assessment method?
Classroom observation	☐	
Conversations and feedback from other teachers	☐	
Video documentation of classroom	☐	
Student (b)logs	☐	
Informal questioning in class	☐	
Informal conversations with students	☐	
Formative assessment of student work (drafts)	☐	
Self-assessment (attitudinal and values)	☐	
Self-assessment (reflection on students' learning)	☐	
Interviews with individual students Focus	☐	
groups with a group of students	☐	
(Computer) tracking of information search	☐	
Performance based assessments	☐	
Media production	☐	
Portfolios	☐	
Written (essay) exams	☐	
Media analysis or critique assignment	☐	
Quantitative surveys	☐	
Teacher made quizzes	☐	
Other(s), please describe	☐	

Q13 For each of these methods that you have used, how did you evaluate or interpret students' responses (please check all that apply)?

Only the assessment methods that were selected by the respondent in Q12 will be shown in Q13

Only the assessment methods that were selected by the respondent in Q12 will be shown in Q13

	By using outcomes or criteria that are clearly expressed beforehand	By using Bloom's taxonomy	By comparing them to previously created exemplars	Looking for depth of thought, evidence, or complex understandings	Using a rubric	Informally (my own judgment)	Looking at the overall context and classroom dynamics	Coding for categories and themes	Comparing pre- and posttests	Other(s), please describe
Classroom observation	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Conversations and feedback from other teachers	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Video documentation of classroom	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Student (b)logs	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Informal questioning in class	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Informal conversations with students	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Formative assessment of student work (drafts)	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Self-assessment (attitudinal and values)	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Self-assessment (reflection on students' learning)	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Interviews with individual students	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Focus groups with a group of students	☐	☐	☐	☐	☐	☐	☐	☐	☐	
(Computer) tracking of information search	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Performance based assessments	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Media production	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Portfolios	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Written (essay) exams	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Media analysis or critique assignment	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Quantitative surveys	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Teacher made quizzes	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Other(s), please describe	☐	☐	☐	☐	☐	☐	☐	☐	☐	
	☐	☐	☐	☐	☐	☐	☐	☐	☐	

Q14 The assessment methods that I use are (please check all that apply):

☐ Self-generated (developed by me and/or my colleagues)

☐ Developed by the state or country in which I work

☐ Developed by others (such as developers of the curriculum that I am using)

☐ Other(s), please describe

Q15 When assessing media literacy in your teaching or research, to what extent do you focus on assessing the product (such as assessing work students have made, exams, or essays they have completed) in relationship to the process (such as student drafts, blogs, questioning or observation in class)?

I only assess the process	I mainly assess the process, but also assess the product	I assess the process and the product equally	I mainly assess the product, but also assess the process	I only assess the product	Not Applicable
○	○	○	○	○	○

Q16 Which of these two statements do you agree with most?

I believe that there is one set of global media literacy outcomes that can be assessed as a whole, regardless of the context.	○ ○	I believe that media literacy will always need to be assessed in a specific context and that a single media literacy assessment instrument can therefore not be developed.

The next questions relate to any challenges you may have encountered when assessing media literacy.

Q17 Which challenges have you encountered when assessing media literacy?

The way you currently assess media literacy may depend on certain factors. To what extent have the following factors influenced the way you assess media literacy?

Q18

	Never	Rarely	Sometimes	Often	All of the Time	Not applicable (I currently do not assess media literacy)
Standards and/or regulations developed by institutions such as the Ministry of (Public) Education or Department of Education.	☐	☐	☐	☐	☐	☐
School regulations	☐	☐	☐	☐	☐	☐
Amount of students I have to assess	☐	☐	☐	☐	☐	☐
Student characteristics (age, educational attainment, etc.)	☐	☐	☐	☐	☐	☐
Time and/or money	☐	☐	☐	☐	☐	☐
Access to technology and equipment	☐	☐	☐	☐	☐	☐
Other(s), please describe	☐	☐	☐	☐	☐	☐

Q19

You mentioned certain assessment methods that you have used before. For each of these, could you mention any challenges that you have encountered (please check all that apply)?

Only the assessment methods that were selected by the respondent in Q12 will be shown in Q19

Only the assessment methods that were selected by the respondent in Q12 will be shown in Q19	I am not sure how to interpret or evaluate my students' responses with this assessment	This assessment method is too prescriptive or intrusive	The assessment method is time consuming or complex to develop	The assessment method is expensive to use or develop	It is hard to measure higher order thinking with this type of assessment	It is difficult to get honest and authentic responses	It is difficult to control the learning environment using this type of assessment	Other(s), please describe
Classroom observation	☐	☐	☐	☐	☐	☐	☐	
Conversations and feedback from other teachers	☐	☐	☐	☐	☐	☐	☐	
Video documentation of classroom	☐	☐	☐	☐	☐	☐	☐	
Student (b)logs	☐	☐	☐	☐	☐	☐	☐	
Informal questioning in class	☐	☐	☐	☐	☐	☐	☐	
Informal conversations with students	☐	☐	☐	☐	☐	☐	☐	
Formative assessment of student work (drafts)	☐	☐	☐	☐	☐	☐	☐	
Self-assessment (attitudinal and values)	☐	☐	☐	☐	☐	☐	☐	
Self-assessment (reflection on students' learning)	☐	☐	☐	☐	☐	☐	☐	
Interviews with individual students	☐	☐	☐	☐	☐	☐	☐	
Focus groups with a group of students	☐	☐	☐	☐	☐	☐	☐	
(Computer) tracking of information search	☐	☐	☐	☐	☐	☐	☐	
Performance based assessments	☐	☐	☐	☐	☐	☐	☐	
Media production	☐	☐	☐	☐	☐	☐	☐	
Portfolios	☐	☐	☐	☐	☐	☐	☐	
Written (essay) exams	☐	☐	☐	☐	☐	☐	☐	
Media analysis or critique assignment	☐	☐	☐	☐	☐	☐	☐	
Quantitative surveys	☐	☐	☐	☐	☐	☐	☐	
Teacher made quizzes	☐	☐	☐	☐	☐	☐	☐	
Other(s), please describe	☐	☐	☐	☐	☐	☐	☐	
	☐	☐	☐	☐	☐	☐	☐	

Q20 If you were not limited by any constraints (such as school/government regulations, time, or money), would you assess media literacy outcomes differently than you currently do?

- ○ Yes
- ○ No
- ○ Not applicable

Q21 How would you ideally assess media literacy?

Q21 is only shown when responded "yes" to Q20)

Q22 A number of media literacy scholars and professionals have identified challenges regarding media literacy assessment.
1) Please check whether you have encountered these challenges in your own practice.
2) In addition, for each of the statements, please check to what extent you believe these are challenges for the field of media literacy education assessment.

Q22

	Please check all challenges that you have personally encountered	Regardless of whether you have personally encountered the challenge, please check to what extent you believe these statements are challenges for the assessment of media literacy outcomes		
	I personally encountered this challenge (check all that apply)	Not a challenge	A minor challenge	Major challenge
Media literacy outcomes are not explicitly defined, so it is not clear what should be assessed	☐	○	○	○
When assessing a media production piece, you cannot fully observe media literacy learning by only looking at the product as you miss the context in which it was produced	☐	○	○	○
Self-assessment surveys may not measure people's true skills as people cannot validly judge their own skills	☐	○	○	○
I believe that there is a contradiction between the control that is inherent to assessment and the development of critical autonomy in the learners	☐	○	○	○
Formal assessment (such as multiple choice questions or written exams) may not capture true media literacy learning	☐	○	○	○
Assessments capturing higher order thinking skills related to media literacy are time consuming, expensive, or complex to develop	☐	○	○	○
There is a lack of teacher preparedness and teacher training to assess media literacy outcomes	☐	○	○	○
It is difficult to go beyond the assessment of lower order thinking skills	☐	○	○	○
Different teachers often score the same students' work differently	☐	○	○	○
Comparing the scores of one class or school to the scores of another class or school is difficult	☐	○	○	○
I feel very limited when it comes to assessing media literacy due to outside influences (such as governmental decisions and other decisions out of my control)	☐	○	○	○
It is very difficult to control learning environments in media literacy research and to therefore get valid quantitative results	☐	○	○	○
It is difficult to take your own philosophical views out of assessment and to think about the influence of your own background on the way you assess students	☐	○	○	○
Students often seem to say what I want to hear, rather than what they truly think or feel	☐	○	○	○
Other(s), please describe	☐	○	○	○
	☐	○	○	○

The next section relates to any recommendations you may have to overcome media literacy assessment challenges.

Q23 Could you describe how you have overcome any challenges you have encountered regarding media literacy assessment?

Q24 A number of media literacy scholars and professionals have identified recommendations regarding media literacy assessment. To what extent do you agree that the following recommendations would improve the effectiveness of media literacy assessment?

	Strongly Disagree	Disagree	Agree	Strongly Agree
Using a variety of assessment methods	○	○	○	○
Conducting more research on media literacy assessment	○	○	○	○
Coming together and collaborating as a research community	○	○	○	○
Being clear and upfront to students about criteria and outcomes	○	○	○	○
Look for depth and sophistication in students' answers, rather than right or wrong answers	○	○	○	○
Be comfortable with broad levels of achievement (as the concepts are very philosophical and conceptual) to avoid invalid levels of accuracy	○	○	○	○
The use of exemplars may help to improve interrater reliability (teachers scoring students' work differently) and to agree on a common standard	○	○	○	○
When assessing media literacy, you should become aware of your own background in order to avoid getting your own philosophical views in the way of validly assessing media literacy	○	○	○	○

Q25 What would be some other ways that you think the effectiveness of media literacy assessment can be enhanced?

Q26 Of course I would like this survey to reach as many media literacy teachers, professionals, and scholars as possible. Since I do not know every media literacy teacher, professional, and scholar, I would therefore like to ask you whether you would like to inform me about any media literacy organizations in your country that I could contact, and/or whether you would be willing to share contact information of any teachers, professionals, and scholars that I may send the survey to.

Thanks so much for participating in this survey!

Appendix G

Expert Reviewer Consent Form Phase II

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Consent for Participants in Research Projects Involving Human Subjects
CONSENT FORM

IRB Study # 13-1103
Title of Study: Media Literacy Professionals' and Scholars' Perceptions of Media Literacy Assessment
Investigators:
Dr. Barbara Lockee   lockeebb@vt.edu
Evelien Schilder   evelien@vt.edu

Purpose of this Research/Project
You are invited to participate as an expert reviewer in a study about media literacy assessment. The purpose of this survey is to gain insight in media literacy teachers', scholars', and professionals' perceptions about media literacy outcomes, media literacy assessment practices, existing challenges, and recommendations to overcome any media literacy assessment challenges. This study the second phase of a two-phase mixed method study on media literacy assessment (the first phase consisted of qualitative interviews).

Procedures
If you agree to be in this study, you will serve as an expert reviewer of my survey protocol. The survey protocol includes questions regarding media literacy outcomes, assessment practices, existing challenges and possible solutions to these challenges. The expert reviewers will examine the survey protocol based on its clarity and alignment with the research questions. The expert reviewer will provide written feedback regarding the clarity and alignment of the survey protocol with the research questions and they will also be given the opportunity for open oral feedback. The oral feedback will take place as an approximately 20 minute Skype conversation at a mutually convenient time and will be audio-recorded.

Risks
There are minimal risks to participation in this study. Risks to participants are no greater than the risks associated with normal conversation. In addition, you have the right to withdraw from participation at any time by notifying the researcher in writing or in person of your desire to withdraw.

Benefits
There are no direct benefits to you for participation in this study. No promise or guarantee of benefits has been made to encourage you to participate.

Extent of Anonymity and Confidentiality
The researcher will keep all data collected confidential. While information gathered from the study may be used in reports, presentations, and articles in professional journals, participant's name or any other identifying information will not be used. Any identifying information will be changed so that the data cannot be connected to the individual; pseudonyms will be used in place of actual names. Every effort will be made to ensure no identifying characteristics of the participant will be revealed in any reporting of the data.
Only the researcher will have access to the audio recording of the Skype conversation. The audio-recorded interview will be destroyed after reporting of results is complete. All other study materials will be retained for a period of not more than three years in secure locations. When all project reporting is complete, the data will be destroyed. The Institutional Review Board (IRB) may view this study's collected data for auditing purposes.

Compensation
Taking part in this study is voluntary; the participant will not be compensated for participating in this study.

Freedom to Withdraw
The participant is free to withdraw from this study at any time without penalty. You may choose to not respond to any research questions that you choose. There may be circumstances under which the investigators may determine that you should not continue to be involved in the study.

Should I have any pertinent questions about this research or its conduct and research subjects' rights, I may contact:
Investigators   **E-mail**
Dr. Barbara Lockee   lockeebb@vt.edu

Evelien Schilder   evelien@vt.edu

If you have questions about your *rights as a participant*, please contact:
Dr. David Moore
Chair Virginia Tech Institutional Review Board for the Protection of Human Subjects
Telephone: (540) 231-4991
Email: moored@vt.edu

Subject's Responsibilities

○ I voluntarily agree to participate as an expert reviewer. I have the following responsibilities: to participate in one approximately 20 minute audio-recorded interview and to provide written feedback regarding the survey protocol.

○ I do not agree to participate in this study.

Subject's Permission

○ I have read the Consent Form and conditions of this project. I have had all my questions answered. By signing this forms and scheduling a time for the Skype conversation, I hereby acknowledge the above and give my voluntary consent.

○ I have not read the Consent Form and the conditions of this project and/or do not give my voluntary consent.

Please type your name and today's date below

Appendix H

Expert Review Rubric: Phase II

Expert Review Rubric/Protocol for written feedback

Reviewer name: Click here to add text   *Date:* Click here to add text

In the first section, please review the survey protocol. Then review the rubric below and provide comments regarding the alignment and clarity of the individual research questions with the survey questions.

Research questions	Survey questions	Comments about alignment of individual research questions with survey questions	Comments about clarity of the individual research questions and survey questions
Questions to better understand the background of the respondent	**Q1** In which country do you reside? **Q2** I am involved with media literacy as a: Please check all that apply / If yes, for how many years? Teacher ☐ Researcher ☐ Developer of media literacy instruction materials ☐ Other role(s), please describe ☐	Click here to add text	Click here to add text

Questions to better understand the background of the respondent	**Q3** Your work on media literacy education is related to (please check all that apply):	Click here to add text	Click here to add text

Q3 Your work on media literacy education is related to (please check all that apply):

- ☐ Children less than 3 years old
- ☐ Nursery school or preschool students
- ☐ Kindergarten students
- ☐ Elementary school students: grades 1-4
- ☐ Elementary school students: grades 5-8
- ☐ High school students: grades 9-12

- ☐ College, undergraduate students
- ☐ Graduate or doctoral students
- ☐ Teacher education
- ☐ Parents education
- ☐ Other group(s), please describe

Q4 My teaching, lesson materials, or research on media literacy is (please check all that apply):

- ☐ Integrated in a specific subject area(s)
- ☐ Taught or studied as a separate subject area

Q5 My work on media literacy education is related to the following (subject) areas (please check all that apply):

- ☐ Health Education
- ☐ Social Studies
- ☐ Language Arts
- ☐ Art Education
- ☐ Vocational Education and Communications
- ☐ Teacher/parent training
- ☐ Other(s), please describe

This question will only be displayed after "Integrated in a specific subject area(s)" is selected in Q4

RQ1: What outcomes do media literacy professionals and scholars identify as important to assess?	**Q6** To what extent are these media literacy goals important to you?	Click here to add text	Click here to add text

Q6 To what extent are these media literacy goals important to you?

	Not at all Important	Somewhat important	Very Important	Extremely Important
I want to prepare students to successfully participate in their personal, civic, and professional lives	◎	◎	◎	◎
I want students to enjoy producing media	◎	◎	◎	◎
I want to reduce the risk of unhealthy behaviors supported in media messages	◎	◎	◎	◎
I want my students to become critically autonomous, to give them a sense of agency or empowerment.	◎	◎	◎	◎
I want students to have pleasure in exploring meaning and asking questions about media messages	◎	◎	◎	◎
I want to help reduce the harmful effects of media	◎	◎	◎	◎
I want my students to have confidence in expressing themselves	◎	◎	◎	◎
Other(s), please describe	◎	◎	◎	◎

Q7 In the work you do related to media literacy, how well defined are media literacy outcomes?

- ◎ I do not specify outcomes
- ◎ I do specify outcomes, but they are broad and open
- ◎ My outcomes are very explicitly defined

Q8 You mentioned that you do not explicitly define your outcomes. Are there any specific reasons for that?

- ☐ I do not know how to create them
- ☐ I want to leave the classroom open for other experiences to happen rather than teaching towards specific outcomes
- ☐ I believe in personalized learning, and therefore do not want to set outcomes for the whole group of students
- ☐ Other

Q8 will only be shown if the respondent answers "I do not specify outcomes" in Q7"

RQ1: What outcomes do media literacy professionals and scholars identify as important to assess?	**Q9** To what extent are the following skills and attitudes important in your work on media literacy? Not at all Important — Slightly important — Very Important — Extremely Important Accessing, using, and experiencing a wide variety of media messages Critically analyzing and evaluating media messages Creating and producing media messages Developing technological or practical skills Reflecting on students' own learning Developing an active habit of inquiry (asking questions about media messages) To become more open minded, flexible, and empathetic Collaborating with other students Other(s), please describe	Click here to add text	Click here to add text
RQ2: How do media literacy professionals and scholars assess these outcomes?	**Q10** What role does assessment play in your work? Strongly Disagree — Disagree — Agree — Strongly Agree Assessment does not play a large role in my work (teaching and student interactions are more important to me) I use assessment to motivate my students I assess media literacy outcomes simply because assessment is inevitable in this world Assessment is critical in my work Other, please describe **Q11** Which of the following assessment methods have you used in your media literacy education or research?	Click here to add text	Click here to add text

RQ2: How do media literacy professionals and scholars assess these outcomes?		Please check all that apply	If yes, could you please explain how you have used this assessment method?	Click here to add text	Click here to add text
	Classroom observation	☐			
	Conversations and feedback from other teachers	☐			
	Video documentation of classroom	☐			
	Student (b)logs	☐			
	Informal questioning in class	☐			
	Informal conversations with students	☐			
	Formative assessment of student work (drafts)	☐			
	Self-assessment (attitudinal and values)	☐			
	Self-assessment (reflection on students' learning)	☐			
	Interviews with individual students Focus	☐			
	groups with a group of students	☐			
	(Computer) tracking of information search	☐			
	Performance based assessments	☐			
	Media production	☐			
	Portfolios	☐			
	Written (essay) exams	☐			
	Media analysis or critique assignment	☐			
	Quantitative surveys	☐			
	Teacher made quizzes	☐			
	Other(s), please describe	☐			

RQ2: How do media literacy professionals and scholars assess these outcomes?	**Q12** For each of these methods that you have used, how did you evaluate or interpret students' responses (please check all that apply)?	Click here to add text	Click here to add text

Only the assessment methods that were selected by the respondent in Q11 will be shown in Q12

	By using outcomes or criteria that are clearly expressed beforehand	By using Bloom's taxonomy	By comparing them to previously created exemplars	Looking for depth of thought, evidence, or complex understandings	Using a rubric	Informally (my own judgment)	Looking at the overall context and classroom dynamics	Coding for categories and themes	Comparing pre- and posttests	Other(s), please describe
Classroom observation	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Conversations and feedback from other teachers	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Video documentation of classroom	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Student (b)logs	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Informal questioning in class	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Informal conversations with students	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Formative assessment of student work (drafts)	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Self-assessment (attitudinal and values)	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Self-assessment (reflection on students' learning)	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Interviews with individual students	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Focus groups with a group of students	☐	☐	☐	☐	☐	☐	☐	☐	☐	
(Computer) tracking of information search	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Performance based assessments	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Media production	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Portfolios	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Written (essay) exams	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Media analysis or critique assignment	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Quantitative surveys	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Teacher made quizzes	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Other(s), please describe	☐	☐	☐	☐	☐	☐	☐	☐	☐	
	☐	☐	☐	☐	☐	☐	☐	☐	☐	

| RQ2: How do media literacy professionals and scholars assess these outcomes? | **Q13** When assessing media literacy in your teaching or research, to what extent do you focus on assessing the product (such as assessing work students have made, exams, or essays they have completed) in relationship to the process (such as student drafts, blogs, questioning or observation in class)?

I only assess the process / I mainly assess the process, but also assess the product / I assess the process and the product equally / I mainly assess the product, but also assess the process / I only assess the product / Not Applicable

Q14 Which of these two statements do you agree with most?

I believe that there is one set of global media literacy outcomes that can be assessed a whole, regardless of the context. / I believe that media literacy will always need to be assessed in a specific context and that one 'golden standard' media literacy assessment can therefore not be developed. | Click here to add text | Click here to add text |
| RQ3: Which challenges do media literacy professionals and scholars identify regarding media literacy assessment? | **Q15** Which challenges have you encountered when assessing media literacy?

Q16 The way you currently assess media literacy may depend on certain factors. To what extent have the following factors influenced the way you assess media literacy?

(Options: Never, Rarely, Sometimes, Often, All of the Time, Not applicable (I currently do not assess media literacy))

Government rules and regulations
School regulations
Amount of students I have to assess
Student characteristics (age, educational attainment, etc.)
Time and/or money
Other(s), please describe | Click here to add text | Click here to add text |

RQ3: Which challenges do media literacy professionals and scholars identify regarding media literacy assessment?		Click here to add text	Click here to add text

Q17 You mentioned certain assessment methods that you have used before. For each of these, could you mention any challenges that you have encountered (please check all that apply)?

Only the assessment methods that were selected by the respondent in Q11 will be shown in Q17

Column headers:
- I am not sure how to interpret or evaluate my students' responses with this assessment
- This assessment method is too prescriptive or intrusive
- The assessment method is time consuming or complex to develop
- The assessment method is expensive to use or develop
- It is hard to measure higher order thinking with this type of assessment
- It is difficult to get honest and authentic responses
- It is difficult to control the learning environment using this type of assessment
- Other(s), please describe

Rows:
- Classroom observation
- Conversations and feedback from other teachers
- Video documentation of classroom
- Student (b)logs
- Informal questioning in class
- Informal conversations with students
- Formative assessment of student work (drafts)
- Self-assessment (attitudinal and values)
- Self-assessment (reflection on students' learning)
- Interviews with individual students
- Focus groups with a group of students
- (Computer) tracking of information search
- Performance based assessments
- Media production
- Portfolios
- Written (essay) exams
- Media analysis or critique assignment
- Quantitative surveys
- Teacher made quizzes
- Other(s), please describe

RQ3: Which challenges do media literacy professionals and scholars identify regarding media literacy assessment?	**Q18** If you were not limited by any constraints (such as school/government regulations, time, or money), would you assess media literacy outcomes differently than you currently do? ○ Yes ○ No ○ Not applicable **Q19** How would you ideally assess media literacy? _____ **Q19 is only shown when responded "yes" to Q18)** **Q20** A number of media literacy scholars and professionals have identified challenges regarding media literacy assessment. 1) Please check whether you have encountered these challenges in your own practice. 2) In addition, for each of the statements, please check to what extent you believe these are challenges for the field of media literacy education assessment.	Click here to add text	Click here to add text

	Please check all challenges that you have personally encountered	Regardless of whether you have personally encountered the challenge, please check to what extent you believe these statements are challenges for the assessment of media literacy outcomes		
	I personally encountered this challenge (check all that apply)	Not a challenge	A minor challenge	Major challenge
Media literacy outcomes are not explicitly defined, so it is not clear what should be assessed	☐	○	○	○
When assessing a media production piece, you cannot fully observe media literacy learning by only looking at the product as you miss the context in which it was produced	☐	○	○	○
Self-assessment surveys may not measure people's true skills as people cannot validly judge their own skills	☐	○	○	○
I believe that there is a clash between the control that is inherent to assessment and the development of critical autonomy in the learners	☐	○	○	○

RQ3: Which challenges do media literacy professionals and scholars identify regarding media literacy assessment?	Formal assessment (such as multiple choice questions or written exams) may not capture true media literacy learning	☐	⊙	⊙	⊙	Click here to add text	Click here to add text
	Assessments capturing higher order thinking skills related to media literacy are time consuming, expensive, or complex to develop	☐	⊙	⊙	⊙		
	There is a lack of teacher preparedness and teacher training to assess media literacy outcomes	☐	⊙	⊙	⊙		
	It is difficult to go beyond the assessment of lower order thinking skills	☐	⊙	⊙	⊙		
	Different teachers often score the same students' work differently	☐	⊙	⊙	⊙		
	Comparing the scores of one class or school to the scores of another class or school is difficult	☐	⊙	⊙	⊙		
	I feel very limited when it comes to assessing media literacy due to outside influences (such as governmental decisions and other decisions out of my control)	☐	⊙	⊙	⊙		
	It is very difficult to control learning environments in media literacy research and to therefore get valid quantitative results	☐	⊙	⊙	⊙		
	It is difficult to take your own philosophical views out of assessment and to think about the influence of your own background on the way you assess students	☐	⊙	⊙	⊙		
	Students often seem to say what I want to hear, rather than what they truly think or feel	☐	⊙	⊙	⊙		
	Other(s), please describe	☐	⊙	⊙	⊙		
		☐	⊙	⊙	⊙		
RQ4: What recommendations do media literacy professionals and scholars make to overcome the challenges of assessment?	**Q21** Could you describe how you have overcome any challenges you have encountered regarding media literacy assessment?					Click here to add text	Click here to add text

RQ4: What recommendations do media literacy professionals and scholars make to overcome the challenges of assessment?	Q22 A number of media literacy scholars and professionals have come up with recommendations regarding media literacy assessment. To what extent do you agree that these recommendations would improve the effectiveness of media literacy assessment? Q23 What would be some other ways that you think the validity and reliability of media literacy assessment can be improved?	Click here to add text	Click here to add text
RQ5: How do responses to these questions differ demographically?	Specific answers on questions 1-5 (questions about respondent's background and context) will be compared with the answers on the other questions (for example, whether respondents who work with younger students may have different responses from respondents that work with college students, or whether English language arts teachers may have different responses from health teachers.	Click here to add text	Click here to add text

Please fill out the rubric regarding other aspects of the research questions and survey questions.

	0 points	1 point	2 points	Score	Comments about score
Bias	The survey questions are strongly biased towards a certain answer or viewpoint.	Certain survey questions are somewhat biased towards a certain answer or viewpoint.	All survey questions do not bias or lead the respondents towards a certain answer or viewpoint.	Click here to add text	Click here to add text
Completeness	The research questions cannot be answered at all using the current survey questions.	Some extra survey questions are needed to answer the research questions.	The research questions can be completely answered using the current survey questions.	Click here to add text	Click here to add text
Order	The survey questions are not logically ordered.	Some survey questions may have to be realigned in order to structure the survey logically.	All survey questions are logically ordered.	Click here to add text	Click here to add text
Privacy	Many or all of the survey questions are not respectful and may invade the respondents' privacy.	Some of the survey questions are not respectful to ask and may invade the respondents' privacy.	All survey questions are polite and respectful.	Click here to add text	Click here to add text
Time	The time set for the survey (15 minutes) is much too long or too short to answer all survey questions.	The time set for the survey (15 minutes) may be a little too long or too short to answer all survey questions.	The time set for the survey (15 minutes) is reasonable to answer all survey questions.	Click here to add text	Click here to add text

Please provide any additional comments regarding the research and survey questions that you felt were not addressed:

Click here to add text

Appendix I

Tables

Table I1

Media Literacy Goals

	n	M	SD
Successfully participate in their personal, civic, and professional lives	170	3.58	0.68
Become critically autonomous, to give students a sense of agency or empowerment	170	3.69	0.58
Reduce the risk of unhealthy behaviors supported in media messages	168	2.98	0.89
Reduce the harmful effects of media	169	2.81	0.98
Enjoy producing media	170	2.99	0.89
Have pleasure in exploring meaning and asking questions about media messages	169	3.59	0.61
Have confidence in expressing themselves	170	3.38	0.71

Table I2

Media Literacy Outcomes

	n	M	SD
Accessing, using, and experiencing a wide variety of media messages	171	3.31	0.68
Critically analyzing and evaluating media messages	171	3.73	0.51
Creating and producing media messages	170	3.14	0.85
Developing technological or practical skills	171	2.95	0.80
Reflecting on students' own learning	171	3.37	0.69
To become more open minded, flexible, and empathetic	170	3.34	0.80
Collaborating with other students	171	3.22	0.76

Table I3

Role of Media Literacy

	n	M	SD
Assessment does not play a large role in my work (teaching and student interactions are more important to me)	155	2.45	0.89
I use assessment to motivate my students	153	2.63	0.70
I assess media literacy outcomes simply because assessment is inevitable in this world	153	2.48	0.79
Assessment is critical in my work	158	2.73	0.87

Table I4

Media Literacy Assessment Challenges Identified by the Respondents Including Examples

Challenge	*n*	Examples
Lack of resources	11	"As a challenge in assessing media literacy I have many times encountered the lack of appropriate and sufficient media technology and tools." "Access to production equipment"
Focus on assessing lower order thinking and difficulty to move beyond it	10	"The current trend is unfortunately to assess digital/tech skills mainly, while the core of media literacy is critical thinking and participation competences." "Those aware of the concept interpret it in different ways, with a tendency to narrow it down to separate aspects of technology, communication, or media."
Formal assessments may not capture true media learning	8	"Among those who see the potential in media and information literacy it often depends on their creativity in seeing what actually is going on among students. There is so much creativity and knowledge that simply isn´t recorded because it doesn´t appear or show itself in a manner that is recordable for teachers. The way we perceive learning and teaching in schools is still so formalized that actual development among students is hard to notice." "Another question is critical literacy. It is difficult to see criticality. That is more or less [a] qualitative term, from any quantitative point of view that could be measured."
School or governmental constraints	8	"Tensions with state-centric view of media literacy, or specifically what it means to be 'critical'" "The challenge we face is that the government has instil[led] fear in the lives of many people that are involve[d] in media literacy. Even most of the surveys conducted on media literacy in my country are false because the government prohibit[s] citizens of the country from talking about media as a whole. . . . My passion is to further my education on media but my family is reluctant to give me the chance because of the number of journalists killed every day in my country and many Gambians are suffering like me."
Lack of interest	8	"Apathy from people who do not understand the importance or significance of media education" "The main problem is that most people simply don't know what media literacy means and why it is important, making assessment difficult."
Lack of time	7	"Time is of course a problem. Time to create assessments, to check them, to mark them." "An overall issue is time to properly assess and explore said media."
Varying student entry levels and perceptions	7	"Applying assessment criteria consistently, particularly with students with very mixed abilities and coming from different backgrounds and experiences" "Many different perspectives and perceptions of learners and users, in addition to skill levels"
Lack of training	6	"Lack of discipline-based preparation of colleagues. Mine were mainly former professional journalists or part-time journalists or part-time instructors who knew nothing about assessment." "Teachers whom we train rarely have own ideas on how to assess media literacy."
Media literacy is too broad and too complex to measure	6	"The concept of media literacy is too wide to be able to measure. It contains so many types of skills, knowledge, attitudes, and combinations of these three." "There are so many different forms of media today that having a critical understanding of all of them is very difficult."

Lack of research	5	"Lack of longitudinal data" "The literature on media literacy is largely shaped by case studies and lacks a clearly defined set of outcomes by competency"
Skills may not transfer to real life	5	"Raising awareness does not necessarily change behavior" "So the impact of media literacy on real life, or the transfer of media literacy skills from in-classroom to out-of-classroom, is usually limited."
Lack of comparability across classes and schools	5	"When media literacy methods are integrated well, every teacher is doing something different, so comparisons are challenging." "The fact that different schools have different interpretations of student ability"
Lack of clear definitions and standards	5	"There are few written standards" "Missing standards for assessment"
Media literacy is a changing field, making assessment ever-changing	4	"The growing use of technology means that we must constantly review and update our methodologies." "Media literacy is in a constant state of flux depending on technological developments, countries specificities, terminology"
Media literacy is always context bound, requiring multiple assessments *	4	"Socio-cultural context is extremely important and there is no any essential literacy practice without changing context. Therefore assessing media literacy is difficult." "I think most media literacy materials that have been created are ethnocentric. . . . I have ended up scrapping almost all media literacy materials that are used by mainstream media literacy organizations and have had to develop my own approach."
It is difficult to quantify media literacy learning	3	"Critical thinking is a personal, individual process, and it cannot be fit easily into a series of checkboxes." "Since the program has been implemented, there have been zero [cyber-incidences], and academics scores have risen. How do you measure, determine whether this is at least partially attributed to the one hour behavioral classes on how to use digital tools wisely and safely?"
Teachers and students have different goals and backgrounds	3	"Differences between student experiences and between student / teacher experiences." "The disproportion between the expectations of participants and goals of lecturers"
Difficult for students to express themselves	3	"Writing skills - they find it hard to express complex ideas." "The challenge is to make the students think of and express their experience."
Control inherent to assessment contradicts creativity and critical autonomy	3	"I strongly believe that rubrics place limits and a boundary around work and stifle creativity - both in practical and theoretical work. Rubrics are the enemy of the creative." "I do not believe in rigid systematization when the matter is critical use of the media"

Table I5

Perceived Challenges to the Field of Media Literacy Assessment

	Not a challenge	A minor challenge	Major challenge	*M*	*SD*
There is a lack of teacher preparedness and teacher training to assess media literacy outcomes (*n* = 116)	15 (12.9%)	23 (19.8%)	78 (67.2%)	2.54	0.72
When assessing a media production piece, you cannot fully observe media literacy learning by only looking at the product as you miss the context in which it was produced (*n* = 112)	20 (17.9%)	51 (45.5%)	41 (36.6%)	2.19	0.72
Formal assessment (such as multiple choice questions or written exams) may not capture true media literacy learning (*n* = 110)	19 (17.3%)	41 (37.3%)	50 (45.5%)	2.28	0.74
Media literacy outcomes are not explicitly defined, so it is not clear what should be assessed (*n* = 113)	30 (26.5%)	45 (39.8%)	38 (33.6%)	2.07	0.78
Assessments capturing higher order thinking skills related to media literacy are time consuming, expensive, or complex to develop (*n* = 112)	19 (17.0%)	42 (37.5%)	51 (45.5%)	2.29	0.74
Self-assessment surveys may not measure people's true skills as people cannot validly judge their own skills (*n* = 107)	14 (13.1%)	69 (64.5%)	29 (22.4%)	2.09	0.59
It is difficult to take your own philosophical views out of assessment and to think about the influence of your own background on the way you assess students (*n* = 104)	30 (28.8%)	52 (50.0%)	22 (21.2%)	1.92	0.71
Students often seem to say what I want to hear, rather than what they truly think or feel (*n* = 105)	37 (35.2%)	50 (47.6%)	18 (17.1%)	1.82	0.71
Different teachers often score the same students' work differently (*n* = 105)	23 (21.9%)	52 (49.5%)	30 (28.6%)	2.07	0.71
I believe that there is a contradiction between the control that is inherent to assessment and the development of critical autonomy in the learners (*n* = 109)	33 (30.3%)	47 (43.1%)	29 (26.6%)	1.96	0.76
It is difficult to go beyond the assessment of lower order thinking skills (*n* = 106)	40 (37.7%)	44 (41.5%)	22 (20.8%)	1.83	0.75
It is very difficult to control learning environments in media literacy research and to therefore get valid quantitative results (*n* = 103)	33 (32.0%)	48 (46.6%)	22 (21.4%)	1.89	0.73
Comparing the scores of one class or school to the scores of another class or school is difficult (*n* = 99)	31 (31.3%)	43 (43.4%)	25 (25.3%)	1.94	0.75
I feel very limited when it comes to assessing media literacy due to outside influences (such as governmental decisions and other decisions out of my control) (*n* = 103)	61 (59.2%)	30 (29.1%)	12 (11.7%)	1.52	0.70

Table I6

How Respondents Have Overcome Media Literacy Assessment Challenges Including Examples

Solutions	*n*	Examples
Collaboration	19	"In my state, where media education is quite strong, I have built a strong network of collegiate support from fellow media teacher[s] to which I can turn to for advice. This is particularly handy given I am the only media teacher at my school." "I overcame challenges by listening to teachers, designing together with teachers." "Cross marking with media colleagues from adjacent secondary schools used to engender more accuracy in assessment across schools"
Being flexible and redefining assessments over time	14	"Every semester I improve my core questions and techniques to dismantle the media messages as well as my references to interpret their outcomes." "I'm updating the assessment criteria for each group I'm working with, there is no such thing as complete criteria for every group."
Developing clear standards and criteria (which may depend on the context)	8	"By narrowing it down to specific parameters and making it age and intelligence specific." "If you are confronted with the necessity of film and media literacy assessments in my opinion one of the most important things is the knowledge about and the application of the criteria of assessing in specific contexts."
Assess media literacy more formatively and informally	8	"I prefer informal ways of media literacy assessment." "We have to get educators to believe in the value of assessment for themselves, as a check on what's going on in the classroom and signal as to what is/isn't working, for their students, as a way to demonstrate what they've learned and how far they've come and where they might want to dive deeper or flesh out in the future."
Allowing for freedom in assessment practices	5	"Unfortunately, this is not a practical solution, but I'm against state standards and I don't like how they impose upon media literacy, which should be organic. I'd prefer to media literacy outside of schools, because it allows for more freedom." "As long as the students are productive and creative I'm happy. Standards imposed from the outside crush learning and diminish human wonder."
Using a variety of assessment instruments	5	"It's in any research methodology - it is best to triangulate, balance the basic skills exam (writing), formalized discussion / reflection (speaking and listening) and actual production outcomes." "I use various methods and tools to assess students learning."
Training and professional development	5	"Attending professional development sessions" "The issue of media and information literacy to be part of school curriculum has been a big challenge and we have overcome this through organizing workshops in school and train them on media ethics incorporating child rights."
Reserving time for assessment	4	"Lots of late nights, lots of emails to students back and forth helping them learn how to edit work" "By taking much time to observe, talk, and interact with students while they are critical thinking, producing media"
Conducting more research	4	"We also provided funds to conduct surveys at the national level." "Getting involved in publication and peer review also is important."
Student input	3	"Ask students for their ideas about how someone could tell whether or not they had mastered a particular skill." "I think it is important that both the student and the teacher agree on methods of assessment."
Adapting existing models	3	"Using previous models of framing (BFI, EU: MEDIA, etc.) to propose new, more inclusive models for measurement within our own country/education system." "Using other Western countries' models - including Ireland, England, Australia, Canada, etc."
Use of rubrics	2	"By using rubrics. I have to formalize my criteria and validate assessment modes, before I communicate them to students." "Rubrics"

Table I7

Respondents' Agreement With Previously Offered Media Literacy Recommendations

	n	M	SD
Using a variety of assessment methods	125	3.52	0.56
Conducting more research on media literacy assessment	126	3.22	0.67
Coming together and collaborating as a research community	127	3.33	0.61
Being clear and upfront to students about criteria and outcomes	126	3.31	0.68
Look for depth and sophistication in students' answers, rather than right or wrong answers	126	3.52	0.65
Be comfortable with broad levels of achievement (as the concepts are very philosophical and conceptual) to avoid invalid levels of accuracy	124	3.19	0.68
The use of exemplars may help to improve interrater reliability (teachers scoring students' work differently) and to agree on a common standard	121	2.93	0.76
When assessing media literacy, you should become aware of your own background in order to avoid getting your own philosophical views in the way of validly assessing media literacy	127	3.20	0.71