The ‘vernacularisation’ of global education policy: Media and digital literacy as 21st century skills in Singapore

Introduction

Media and digital literacy have been important areas for research and scholarship in a diverse set of academic disciplines, including media and communication studies, new literacy studies and education. To some extent, traditions shape the central issues of these disciplines’ approach to digital and media literacy as well as the concepts and methods through which researchers explore them. Yet an important insight shared by most is the recognition that digital technologies are not merely new tools to help people conduct old practices faster or more efficiently. Rather, they have opened up unique communicative spaces that extend existing human networks and the ways in which people connect with others. These spaces also present opportunities for social transformation but unequal access and participation can further entrench existing inequalities along new, digital lines (Jenkins et al., 2009; Reilly et al., 2012). The implications of these insights entail that 21st century digital media and technology education must encompass technical, socio-cultural, communicative and civic skills and competencies and aim primarily at effecting personal empowerment and positive social change (Burn & Durran, 2007; Garcia & Morell, 2013).

Media and digital literacy also figure prominently in visions of 21st century education that seem to be on the agenda of international education bodies and national governments across the globe, spurred by arguments that changed conditions of work and life require new skills and dispositions that will enable young people to succeed personally and professionally. The centrality given to media and digital literacy among 21st century skills is not surprising, given that digital technological advances within the last twenty years have acted as catalysts for the economic and social changes to which frameworks for 21st century school education aim to respond. Yet despite many frameworks claiming to advance
social-democratic ideals, some academics have been strongly critical of the primarily economic framing of 21st century education policy initiatives, arguing that they are essentially blueprints for training an agile national workforce to compete in global markets (Ball, 2009). Seen in this light, media and digital literacy are not so much pathways to personal and social betterment but simply policy tools (Livingstone, 2008) to aid the competitiveness of national economies through the ICT-upskilling of workers.

These differences are not just a matter of rhetoric but can become sources of tension particularly for teachers and educators who must navigate them in their everyday practice. This paper aims to investigate the policy-practice nexus of 21st century skills within Singapore’s education landscape, specifically as it relates to media and digital literacy and the role of creative digital expression. First, drawing on an analysis of relevant Singapore policies and curricula, I show how the vernacularisation (Rizvi & Lingard, 2010) of media/digital literacy as a 21st century skill in Singapore’s education has marginalised the role of creative, digital expression. Second, relying on survey results on English teachers’ media literacy instruction, I trace how this curricular marginalization has affected classroom teaching of media literacy. Third, based on self-reported student data that showed low levels of media production, I argue that the backgrounding of creative, digital forms of expression jeopardises the goals of Singapore’s 21st century education framework. At a broader level, the paper contributes to research on 21st century education by highlighting the need for more empirical research on the implementation of global policies within local political-educational ecologies.

Scholarly approaches to media and digital literacy

It is useful to disentangle the terms ‘media literacy’ and ‘digital literacy’ as despite largely overlapping agendas they have different disciplinary origins. Media literacy developed in parallel with mass media technologies in the early 20th century as an educational initiative to raise young people’s awareness to
the effects of these communication platforms on audiences (Hobbs & Jensen, 2009). It has received continued research attention within the fields of media education, communications studies as well as health studies, with research often involving an interventionist design to help people protect themselves from potentially harmful media effects or to promote healthy behavior through media literacy (Bergsma, 2011; Potter, 2010). But with the shift away from the one-to-many media of television and radio toward technologies that facilitate networked communication, the role of audience as passive recipients could no longer be assumed. Recent conceptualizations of media education have emphasised the active role of media users who participate in and shape conversations in new digital communicative landscapes (Buckingham, 2003; Jenkins et al., 2009). Literacy, with its connotations of empowerment and agency, has supplanted audience as a key conceptual anchor through which to examine people’s active engagement particularly with newer forms of media (Livingstone, 2008). Media literacy in this perspective is understood as one’s ability to access, evaluate and create media texts as a member of communities, orienting to these communities’ norms, values and ethics of cultural production and participation (Buckingham, 2003; Hobbs, 2007, 2011).

Although the term digital literacy is widely used in public policy and various subject curricula, current understandings trace back to conceptual shifts in the 1970-80s regarding what it meant to be literate (Lankshear & Knobel, 2003). Influenced by cross-cultural ethnographic research into community textual practices, scholars of New Literacy Studies critiqued autonomous concepts of literacy (often equated with reading) and argued that reading and writing are a sociocultural practice that is intimately connected to notions of identity, place, and power (e.g., Street, 1995; Gee, 1990). To be literate means to be familiar with linguistic conventions as well as the social and cultural knowledge and values that attach to textual practices; something school literacy education ought to take into account. This idea of literacy as competent use and understanding of a particular practice quickly gained popularity
(Lankshear & Knobel, 2003) and became particularly handy to describe a range of newly emergent skills and abilities in relation to technology.

The sociocultural, pluralistic understanding of textual practices by New Literacy scholars also undergirds the way digital literacy has been understood in recent scholarship “as a shorthand for the myriad social practices and conceptions of engaging in meaning-making mediated by texts that are produced, received, distributed, exchanged, etc. via digital codification” (Lankshear & Knobel, 2008, p. 5). This definition reflects a “view from the bottom” (Sefton-Green, Nixon & Erstad, 2009) that builds on ethnographic insight into the complex social-semiotic and emotional work that engagement with digital literacy practices and communities entails. This “new ethos” (Lankshear & Knobel, 2011) of collaborative meaning-making in affinity spaces has brought digital literacy in alignment with empowerment perspectives within media literacy, although media literacy continues to encompass older forms of mediated communication as well as a host of other themes such as copyright or media ownership.

As educationally desirable competencies, digital and media literacy have increasingly been incorporated into curricula, supported by educational research into how they can be fostered within the context of formal school learning. Several key features of school-based digital and media literacy approaches have emerged. First, digital and media literacy are generally conceptualised as involving both a basic/functional dimension that stresses skills of access, as well as higher-order thinking/literacy skills and dispositions of analysis and critique/evaluation (e.g., Bawden, 2008; Buckingham, 2003; Chen, Wu & Wang, 2011; Hobbs, 2011; Morrell et al., 2013). The functional skills may include technical know-how, basic information retrieval as well as understanding multimodal, multimedia texts and messages. The critical-analytic aspect of digital and media literacy is summed up by Buckingham (2008) as entailing an awareness of 1) digital media as representation; 2) the unique rhetorics of digital communication; 3) corporate-commercial interests underlying digital media production; and 4) audience. Second, there is emphasis on a reflective awareness of the ethics of participation in digital spaces, which Jenkins et al.
(2009) identify as a key challenge for policy and pedagogical interventions. Adding specificity to this argument, Lim et al. (2013) stress nurturing youth’s negotiation skills to manage risks involved in participatory media, especially for at-risk youth.

A third and central aspect of digital and media literacy education concerns opportunities for creative production of (digital) media content, which is seen as an important avenue for personal empowerment (Cheung, 2009a; Chu, 2009) as well as critique and social change (Garcia & Morrell, 2013). Such creative uses of digital media can range from “reproduction literacy” (Eshet-Alkalai, 2004) of remixing, repurposing or otherwise altering existing content to producing new digital texts. The call to incorporate (digital) production within school learning is further motivated by the fact that it is part and parcel of the culture of mediated digital practices and therefore ought to be fostered within school-based approaches to digital/media literacy. On the one hand, authentic communication and problem solving through multimodal production provides a link between classroom learning and the real world (Hobbs, 2010; Doerr-Stevens, 2016) and contributes to the transformative goals of education. On the other hand, educators cannot ignore the fact that young people’s online media activities are primarily entertainment-centered (Hobbs & Jensen, 2009). Scholars have recognised the importance of pleasure in relation to media use and have advocated balancing media critique with a focus on learners’ interests and identities in relation to media (Alvermann & Hagood, 2000; Burnett & Merchant, 2011; Gainer, 2007; Pangrazio, 2016). More recently, the notion of play has come to the foreground in conceptualizations of media/digital literacy education. Jenkins et al. (2009) explicitly highlight play as a key new skill, understood as ‘the ability to experiment with the surroundings as a form of problem solving’ (p. xiv). For Reilly et al. (2012) play is not simply a skill but rather a “way of seeing oneself and the world through a new creative lens” (p. 6). Play is thus a disposition toward the world that encourages constant learning, innovation and creativity.
**Media/digital literacy and 21st century education**

Media and digital literacy have been embraced as policy priorities by international education bodies and national governments across the globe, often as part of a broader agenda for 21st century skills and competencies. In this section, I review a number of these initiatives with two guiding questions in mind: How do they conceptualise digital/media literacy? and What role is accorded within their conceptualization to creative, digital forms of expression? There are numerous initiatives and frameworks one could include in such a review. However, my selection was guided by two principles: to include frameworks that had applicability beyond the national level and that originated from different geographic areas. Four frameworks were chosen, two produced by US-based educational non-profit organizations (P21 and ISTE), one by UNESCO and one EU initiative.

Both Partnership for 21st Century Skills (P21, 2015) and the International Society for Technology in Education’s (ISTE) *Standards for Students* (2016) are well-known initiatives. Whereas P21 can be considered a broad curricular framework, the International Society for Technology in Education’s (ISTE) recommendations are specific to the digital technology needs of 21st century learners. The EU-supported framework, ATS2020, is a collaborative project aimed at developing and measuring transversal skills with 250 participating schools across the Union. Transversal skills, a preferred term in EU policy documents, are skills that transcend traditional subject areas and include critical thinking, problem-solving, working collaboratively and using digital tools (ATS2020, n.d.); what other documents refer to as 21st century competencies. The fourth document is UNESCO’s regional guide to ICT in education (Anderson, 2010) written for teachers, teacher educators and administrators particularly in the Asia-Pacific. Much like other 21st century frameworks, the Guide is premised upon the need for educators to transform school teaching and learning in light of major technological changes of the last few decades. It puts forth a framework for digital literacies that should serve as a foundation for ICT implementation in
schools in the region. In the following, I highlight key points from the comparative analysis guided by the two questions stated above.

While all frameworks reviewed incorporate some form of digital/technological competence or literacy as 21st century competences, the way in which they organise and label them varies. For P21 (Partnership for 21st Century Skills, 2015), information, media and ICT literacy are grouped together as related components of 21st century education. The ISTE’s (2016) Standards for Students identifies the following areas of competency which youth need to “engage and thrive in a connected, digital world”: empowered learner, digital citizen, knowledge constructor, innovative designer, computational thinker, creative communicator and global collaborator (ISTE, 2016). Media and digital literacy are not explicitly mentioned in the Standards, nor is the term ICT literacy used. ATS2020 identifies information literacy, collaboration and communication, autonomous learning and creativity and innovation as key transversal skills, with digital literacy as a separate skill that is supposed to permeate all others (ATS2020, n.d.). UNESCO’s Guide explicitly references and builds upon P21’s framework but uses the umbrella term digital literacies to cover its 21st century skills.

In terms of the actual skills and competencies identified, there is again overlap. For P21, information literacy is viewed as the ability to access, use, evaluate and manage information (which is not explicitly defined), while media literacy encompasses the analysis and creation of media products. ICT literacy is explicitly linked to the effective application of technology for information literacy, among others to “successfully function in a knowledge economy” (p. 6). Despite the use of different terminology, many of the skills or areas of competence advocated in the academic literature and P21 are present in ISTE’s Standards. For instance, an understanding of privacy, security and ethics is listed as a key indicator of being a digital citizen while critical skills such as evaluation and analysis are explicitly highlighted in two competency areas. Many of the key indicators identified under each area explicitly refer to the use of technology and digital tools, although the term ICT literacy is not used. In ATS2020,
information literacy is mainly conceptualised in terms of the ability to conduct research and involves locating, managing and evaluating data, whether online or offline while the definition of digital literacy as “using digital applications and tools in an effective and responsible way” seems to emphasise tool use. UNESCO’s Guide identifies several ‘abilities’ as together making up digital literacies, among them searching, managing, creating and evaluating information, the use of ICT to solve problems, sending and receiving messages and the making of multimedia presentations (Anderson, 2010, p. 27).

Creating information/media is present in all four frameworks as a key competence. For P21, “media creation” is an explicit component of media literacy that encourages the use of media tools for expression in diverse, multicultural environments (Partnership for 21st Century Skills, 2015, p. 5) while ICT literacies also emphasise the use of digital technologies to “communicate and create information” (p. 6). Creation is a key element in ISTE’s competence area of ‘Creative communicator’, defined as someone who can “communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals” (ISTE, 2016). Skills of digital production are not explicitly mentioned in ATS2020, the need to enable students “to produce works of originality and innovation, and effect change” echoes competencies linked to creative production emphasised by other frameworks. Finally, the UNESCO framework designates the making of multimedia presentations as a key ability under digital literacies. In sum, while the way in which frameworks organise and label components of ‘21st century skills’ varies, there is significant overlap in the kinds of competencies they promote, which includes some form of creative, digital communication.

The similarity of skills and priorities across frameworks should not come as a surprise. Education policy today is no longer the outcome of sovereign states’ local decision-making; rather, it is proposed, propagated and authorised through a global network of IGOs (like the UN or the EU), NGOs (like P21 and ISTE), national governments, social entrepreneurs and businesses (Ball, 2012; Rizvi & Lingard 2010). Propagated as solutions to long-standing and novel educational ‘problems’, education policies flow
through these loose global networks, “carrying particular discourses and practices of educational change, innovation and improvement” (Williams, Gannon & Sawyer, 2013, p. 792). Often, 21st century policy initiatives invoke the combined needs of world and work as their raison d’etre, as if the human resource demands of global market capitalism unproblematically dovetailed with the democratic goals of technologically advanced societies. Powerful as the harmonising rhetoric of global edu-speak might be, the ideological tensions it conceals often become discernible through local policy implementation. Therefore, while the power and influence of global networks should be the object of policy analysis (Ball, 2012), there is also a need to study and describe the ‘vernacular character’ (Rizvi & Lingard, p. 97) of globally mobile policy initiatives in order to understand the multiple forms and dimensions through which socio-spatial relations of power are organised (Jessop, Brenner & Jones, 2008). In what follows, I examine Singapore’s uptake of digital and media literacy as 21st century skills. I first consider relevant local policies, aiming to identify how digital and media literacy are conceptualised, and the role accorded to creative (digital) production. Then I provide empirical data on how the policy has been enacted in educational practice and discuss implications for local policy and practice.

**Media and digital literacy in Singapore’s education policy**

*Media and digital literacy as 21st century skills in Singapore*

Similar to other countries, Singapore has recognised the educational challenges globalization and technology brought about by articulating its own framework for 21st century competencies. In line with Singapore’s mission to provide a ‘student-centric, values-driven education’ (Heng, 2011, September 22), ‘core values’ constitute the framework’s focal point and foundation, identified as Respect, Responsibility, Integrity, Care, Resilience and Harmony (MOE, 2009). A set of social and emotional competencies follow that are posited as necessary for children to develop positive ways to manage themselves and their relationships. The outer ring of the model represents 21st century skills familiar
from other frameworks and includes three interrelated sets, Civic Literacy, Global Awareness & Cross-Cultural Skills; Critical and Inventive Thinking; and Communication, Collaboration and Information Skills, of which the latter is the most relevant to the current paper. It is worth quoting in full what the Ministry of Education’s (2009) framework understands this skillset to involve:

With the Internet Revolution, information is often literally just a click away. It is important that our young know what questions to ask, how to sieve information and extract that which is relevant and useful. At the same time, they need to be discerning so that they can shield themselves from harm, while adopting ethical practices in cyberspace. The workplace of the 21st Century requires our young to be able to work together in a respectful manner to share responsibilities and make decisions with one another to meet group goals. Importantly, they should also be able to communicate their ideas clearly and effectively.

This definition echoes ideas from both similar frameworks as well as the academic literature, although framing these competencies as responding to requirements of ‘the workplace of the 21st century’ indexes a strong economic rationale. “Sieving” and “extracting” information address skills of access while “discernment” suggests a more critical stance toward information and media content, albeit the protectionist tone of ‘shielding oneself from harm’ signals a media education approach of ‘inoculation’ that most Asian countries have left behind (Cheung, 2009b). The references to online “ethical practices”, “respect” and “responsibility” connect to a key concern of 21st century frameworks (P21, ISTE) as well as scholarly arguments about the challenges of participatory culture (e.g., Jenkins, et al., 2009). Yet notably absent from this passage as well as the entire framework is any mention of creative, expressive production as an important competence and component of 21st century education. This is in contrast to the central role assigned to these competencies by international frameworks, as argued above. It also goes contrary to research about new media literacies and how they should be fostered in schools (e.g., Buckingham, 2003; Hobbs, 2010; Reilly et al., 2012), which emphasises opportunities for creative, playful
engagement with new media. In order to fully assess how creative expression through (new) media production as 21st century competence figures in Singapore’s education system, it is necessary to examine other related policies.

*Media literacy in Singapore’s framework for technology in education*

Singapore has long embraced media and technology as key drivers of economic development and has promulgated a pro-IT stance through various policy initiatives aimed at increasing connectivity in key economic sectors, government and society (e.g., IDA, 2000; 2005; 2015). This has included education, where a series of masterplans over the last twenty years have seen an evolving role for ICT in school teaching and learning, encompassing curriculum, content and infrastructure. The current ICT Masterplan 4 (2015-2020) envisions to nurture “future-ready and responsible digital learners” through among others a deep integration of ICT in curriculum, assessment and pedagogy (MOE, n.d.). One strategy for integration is fostering digital learning, specifically through cyber wellness and new media literacies. Cyber wellness is understood as having an “understanding of online behavior and awareness of how to protect oneself in cyberspace”, with respect, responsible use and positive peer influence as core principles (MOE, n.d.). The website for Masterplan 4 does not elaborate on what is meant by new media literacy, nor is there any specific mention of creative aspects of technology education.

*Media and digital literacy in the English language (EL) curriculum*

ICT as well as 21st century skills are meant to be infused in the teaching of all subjects in Singapore schools. English language, an important and mandatory subject in all government schools, is one subject area where media literacy and to some extent digital literacy, have been explicitly highlighted in the national curriculum. This is similar to the US, where language arts has served as a key vehicle for media literacy development. But it must be noted that while English is the medium of
instruction in most Singapore schools, its teaching as a subject is more appropriately described as an ‘L1.5’ (as opposed to a first language/L1 or a second language/L2) approach. This is because despite English increasingly becoming a home language for many Singaporean children, a significant number of them still grow up speaking their ethnic languages at home. Most children entering school will likely have command of the local colloquial variety of English (an English-based creole that is stigmatised and highly discouraged in official domains, including schools) and may have been exposed to the standard variety (Standard Singapore English, promulgated in media and public administration) in pre-school. Given this language background, the national EL syllabus (MOE, 2008) advocates a blend of first and second language teaching approaches that fuses explicit structural emphasis with a contextual understanding of communication. A further important characteristic of English education in Singapore is the separation of English language and English literature as school subjects. While the former is compulsory, with most secondary students having at least six 50-minute periods per week, literature is compulsory only at the lower secondary (ages 13-14) level.

The current national syllabus, which was rolled out in 2010, aims to provide foundational and rich language experience for all pupils, with the “rich” part achieved through “the use of a variety of print and non-print resources that provides authentic contexts for incorporating the development of information, media and visual literacy skills in the teaching of listening, reading, viewing, speaking, writing, and representing” (MOE, 2008, p. 9), with media literacy defined as “the ability to access, analyse, evaluate and create information in a variety of forms and media” (MOE, 2008, p. 128, emphasis mine throughout this section). In addition, the syllabus also mandates “opportunities for pupils to be exposed to and engage in producing a variety of multimodal texts to represent ideas effectively and with impact” (MOE, 2008, p. 9) and states that productive skills should involve speaking, writing and representing “for creative, personal, academic, and functional purposes” (MOE, 2008, p. 10). In addition to this broad acknowledgment in the introductory section of the syllabus, some of the skills
reappear under the six areas of language learning according to which the syllabus is organised: (1) listening and viewing; (2) reading and viewing; (3) speaking and representing; (4) writing and representing; (5) grammar and (6) vocabulary. For instance, critical reading and viewing, a subskill of the larger category of reading and viewing, emphasises the need to learn how to “analyze the underlying meaning of visual messages, offer interpretive judgment, and question and evaluate what is read from a variety of sources” (MOE, 2008, p. 34). Further, under speaking and representing, the syllabus states that “teachers will provide opportunities for pupils to plan, organise and deliver appropriately their ideas in a variety of media and forms, such as through the use of posters and planned multimedia and spontaneous presentations” (MOE, 2008, p. 46). Finally, to facilitate the syllabus’ commitment to Assessment for learning, teachers are encouraged to design a diversity of assessment tasks, including some that may entail technologically mediated forms of expression, such as multimedia productions, portfolios or learning logs (MOE, 2008, p. 122).

The EL Syllabus’ emphasis on fostering effective, impactful communication within authentic cultural contexts aligns with the central position of communication in all 21st century frameworks. The document places much weight on developing foundational skills in language while recognizing the significance of an enriched language experience through critical-analytic skills and the infusion of media, visual and information literacy. However, the bulk of the syllabus dissects subject English into precise skills, strategies, attitudes and behaviors, corresponding to focal areas and learning outcomes for each of the six learning areas. There is no explicit segment dedicated to media or digital literacy in the document. While delineating specific skills within a language syllabus is to be expected, as a blueprint for school-based syllabi, it runs the risk of leading to isolated skills development without due attention to the cultural-contextual embedding of literacy practices. Notably, none of the key learning outcomes, which “should be used to guide decisions on what is to be taught and assessed” (MOE, 2008, p. 122), make explicit reference to the creative production of digital or multimedia texts. If media and digital
literacy and creative digital media production is highlighted as important in spirit only, or as a guiding principle, it is questionable to what extent it will figure in the enacted curriculum of everyday English teaching.

**Media and digital literacy in English classrooms**

Moving from policy to practice, this section provides a glimpse into classrooms based on empirical data collected as part of a larger project on school-based media literacy development through the subject of English. In line with the scholarly literature reviewed earlier, media literacy was understood as the ability of a person to access, analyse and critically evaluate media texts as well as engage in the cultural production of media texts.

**Data and methods**

The project aimed to explore the integration of media literacy education in the teaching of English in Singapore secondary schools. Three primary research questions guided the study: 1) How is media literacy currently integrated in the teaching of English in Singapore secondary schools? 2) What contextual factors influence the integration of media literacy in English in two select Singapore secondary schools? 3) What contextual factors inform and shape the development and implementation of a pedagogic framework for media literacy through English language? These research questions loosely corresponded to three phases of the study: 1) A survey of current pedagogical practice in Singapore secondary schools in relation to how media literacy is implemented and infused in English lessons; 2) An in-depth study of two Singapore secondary schools’ media literacy instruction; 3) Collaborative work with teachers and two classes per school to design and implement media literacy units (cf. Author et al., YEAR). The study employed varied methodologies and analytic frameworks throughout to fit the goals and research questions of each phase. The current paper will primarily draw on two data sources: the teacher survey from the first phase (N=202) and media logs from select
students (N=32) who recorded their media-related activities for one week in the second phase. These data sources were chosen because they provide relevant insight into the role of digital production or creative forms of expression in media/digital literacy.

The survey’s primary objective was to map teachers’ understanding and current pedagogic practice of media literacy, comprising four main sections: 1) Teachers’ understanding of media literacy; 2) Teachers’ personal media use; 3) Teachers’ pedagogic practice; 4) Assessment. It was validated on a pilot sample and subsequently administered to a stratified random sample of secondary schools based on school academic achievement.¹ Altogether 202 teachers responded, representing 18 different schools. Inferential and descriptive statistical analyses of closed-ended items and qualitative coding of open-ended questions by two project researchers were the primary means of analysis.

The media logs were gathered as part of data elicited from students in the project. During the school phase of the research, focus group discussions were conducted with a total of 32 students aged 14-15 to learn about their perspectives on school media/literacy education (focus group data is not part of the current paper, but see Author, year). After the initial focus group session, all participants were asked to keep a media log for one week. The media log was a prepared sheet students had to fill in with information regarding media type/program/app, frequency of use, minutes spent, and a brief description of the activity. In addition, they were asked to consider whether particular instances of media use were more a solitary act (e.g., reading the news online) or social in orientation (connecting with friends), and similarly, whether it involved consumption (viewing, reading, listening) of media or entailed the sharing and creation of information (pictures, links, posts, etc.). Students were verbally briefed on the use of the log form. The analysis of the logs for the present paper involved descriptive statistics to identify the frequency and proportion of time youth spent on various types of media and activities.
Digital production in teaching media literacy through EL: Some survey findings

The survey was fairly broad in scope, and only a few questions touched on issues of creative production, which will be the focus of this section (see Appendix for survey items used for this paper; full survey can be obtained from the author). In terms of teachers’ understanding of media literacy (see questions under 1.0 in Appendix), the survey results indicated that Singapore English teachers showed stronger support for an understanding that focuses on functional and critical elements than for a more extended definition that includes aesthetic design and active creation of media texts. These two conceptualizations constituted two different scales in the survey. For survey items that related to the scale of traditional understanding, teachers’ mean score on a six-point Likert scale of agreement was 1.83 (SD=.58) while for items clustering around an extended conceptualization of media literacy, the mean was 2.35 (SD=.54). While the difference is not huge, it is certainly indicative of subtle differences in what teachers consider the core concerns of media literacy, which is less likely to include media text creation and matters of design.

Further support for an understanding of media literacy as chiefly concerned with critical analysis comes from the open-ended section of the survey (Question 5.0 in Appendix) where teachers answered the question: Is it important for you that Media Literacy be taught in Singapore secondary schools? Please elaborate. Teachers’ responses were coded according to how they justified the need for media literacy education, with five main reasons emerging. (Percentages indicate the percentage of respondents (N=194) who offered a particular reason (some respondents stated more than one or none)).

- **Critical reading/thinking** (50.8%): justifies the importance of media literacy on the basis that students need to have skills of critically analyzing and evaluating media content, messages and information
- **Media-saturated world** (45.3%): justifies the importance of media literacy because of the ubiquity of (social) and digital media and youth’s regular use of it
• **Curriculum** (12.4): justification makes reference to curricular notions or priorities (e.g. applied learning, cyber wellness)

• **Responsibility** (9.8%): justifies the importance of media literacy in order to ensure responsible media use

• **Student engagement** (1.5%): justifies the importance of media literacy as a way to engage students

Teachers saw the need for media literacy primarily in order to develop students’ critical, evaluative skills and due to the ubiquity of digital media in youth’s lives. None of the responses made any reference to the need to foster creative, expressive uses of media or the use of media for collaborative problem-solving.

Survey questions relating to pedagogic practice asked teachers about the types of media texts they used in class, how often they used them, factors influencing their choice of media texts for classroom use and what aspects of media literacy they covered in their teaching. Teachers’ responses to the latter (see Q3.15 in Appendix) revealed the relative priorities accorded to various aspects of media literacy (see Table 1).

*Insert Table 1 here.*

As can be seen, the two most highly ranked topics relate to the critical analysis of media content while the next two themes cover ethics and online safety. All of these topics are part of media literacy as discussed in the review of literature, and they are also strongly linked to digital skills as detailed in various 21st century skills frameworks. Topics concerning artistic and design aspects of media texts, a skill that is linked to production, is regularly covered by less than half of the teachers who responded. Even fewer incorporate technological skills, which while not explicitly linked to creative, digital production, clearly play a role it (Merchant, 2009). The priorities implied by Table 1 align with teachers’
understanding of media literacy in that points 1 and 2 represent critical-analytic skills which are prioritised by teachers.

Further relevant data come from teachers’ responses about how they assess media literacy in their EL teaching (see question 4.1 in Appendix).

Insert Table 2 here.

As Table 2 indicates, the most frequent type of assessment for media literacy was written text/examination. While this is not entirely surprising given the centrality of exams to measure academic performance within Singapore’s education system, it is rather surprising in light of the typically problem-focused, collaborative and creative projects that are a hallmark of new media pedagogy. The frequency of written tests in Table 2 also suggests the types of skills that are likely to be assessed via such methods, which are functional and critical-analytic competences. Student portfolio and production of media resource rank at the bottom of the list, in contradiction to the EL Syllabus’ intent to foster Assessment for Learning and to the emphasis they receive within 21st century frameworks. Finally, if assessment is a reflection of teaching priorities, it is not unreasonable to assume that activities that focus on the process of creative production with various media occupy a marginal place within classroom teaching.

Youth media habits and digital creation

This last section provides empirical data on students’ use of various digital and analog media that was gathered as part of the media literacy project. Based on descriptive statistical analysis of the numerical data across the two schools, several observations can be made. First, despite the fact that the two schools were very different in terms of academic standing, with one coming from the lowest third band
based on academic achievement (see Note 1) while the other considered an elite school that followed a special language arts curriculum, students’ media use showed remarkable similarities. As such, results will be presented combined for both schools. In terms of the type of media used by these youths on a daily basis, social media tops the list (Figure 1) with fewer students reporting daily use of other websites/internet and television. Mobile music, online videos and mobile games seem to cluster around similar frequencies, while only around 20% of youth reported daily use of print media, specifically newspapers and books. These findings closely align with those of the National Youth Survey (National Youth Council, 2014) that has found high frequency of daily internet, specifically social media use, among young Singaporeans. This is no doubt facilitated by the extremely high rates of broad band internet access in the country, where 97% of households with school-going children have home Internet access while close to 100% of residents aged 7-49 have Internet access at any location (Infocomm Development Authority of Singapore, 2013).

*Insert Figure 1 here*

Students’ media logs give us a glimpse of how these young people actually use various media. Most relevant to the current paper’s focus on the role of creation/production of digital media texts, the logs reveal that youth’s activities are more characteristically solitary and consumption-oriented. Overall, youth in both schools averaged about 34-35 hours of media-related activities during the one-week logged period. But from the total number of activities categorised by students as either involving consumption vs. sharing/creation, 78% were labeled as consumption and only 22% as sharing/creation. A similar distribution was found in relation to the question on whether students’ media use was more solitary or social in nature, with 76% of activities being categorised as solitary as opposed to 24% of those reportedly involving or connecting to others, though on this point there were some differences between the two schools.² It is clear that the methodology of self-report is not without problems, and
the distinction between what is solitary/social or consumption and production is not always easy to maintain in actual practice. Yet these media logs do provide us with some clear trends about these young Singaporeans’ media use: they are connected and engage with diverse, mostly digital media, on a daily basis, but their engagement is largely characterised by consumption, rather than by ‘prosumption’ (Chen et al., 2011).

This finding in and of itself is not surprising; research has shown that the ‘digital native’ teenager who is immersed in the constant production and distribution of mashups and memes does not match young people’s actual digital practices (Lenhart et al., 2007; Livingstone, 2009). Yet the primarily consumption-geared digital profile of Singapore teenagers becomes significant when viewed in connection with the lack of policy and curricular attention given to issues of creative forms of digital expression. If both leisure and curriculum time of Singapore youth lack creative engagement with (digital) media, some of the 21st century skills envisioned by the Ministry of Education (especially those relating to creativity and communication) may not be attainable.

**Discussion and implications**

Despite being touted as an important 21st century skill by most international frameworks, creative expression using digital media does not feature in the Singapore Ministry of Education’s framework on 21st century competencies. While the framework recognises the importance of communication and challenges/opportunities posed by the ubiquity of new media, the educational emphasis seems to rest on digital media ethics and responsibility, in alignment with the prominence given to cyber wellness within the MOE’s ICT Masterplan 4. These trends reflect findings from previous research into media literacy and digital production outside the school educational domain. Lin, Mokhtar & Wang (2015) noted the lack of reference to creating media in the Media Development Authority’s (Singapore’s key media regulatory body) definition of media literacy, which only encompasses critical reading. In a critical assessment of government-sponsored media production initiatives, Lim, Nemkat & Vadrevu (2011)
argued that the heavy presence of a nation-building agenda can limit participants’ autonomy and creative freedom, and recommended more active engagement from the private industry in spearheading such initiatives. Similarly, the Media Literacy Council’s activities have been critiqued as disproportionately focused on the ethical dimension of media literacy, evidencing a mainly protectionist approach that does little to empower youth through media literacy (Author, Year).

It is clear that one must broaden the lens of investigation beyond that of curriculum and educational policy in order to gain a complex understanding of how seemingly global ideas such as media/digital literacy as 21st century skills take shape as enacted practice in local political-educational ecologies. For instance, it is impossible to ignore the fact that media are heavily regulated in Singapore, the print press more so than online outlets. While media regulation is quite common in many countries, critics have pointed to the political nature of control in Singapore since the main regulatory body is not an independent organization but a government agency (George, 2012). In short, the tight media oversight has resulted in a culture of self-censorship in public media and due to infrequent but high-profile deterring cases, also online. Against this media regulatory backdrop, it is interesting to note the Singapore government’s efforts through its latest initiative, Infocomm Media 2025, to create “a living lab to entrepreneurs, growth companies and multinationals in the infocomm media space where they continually experiment and innovate to contribute to sustainable and quality economic growth” (Infocomm Development Authority of Singapore, 2015). In other words, while creativity and innovation within the ICT and digital media sphere are to be harnessed for their economic promise, their civic and political potentials are firmly curtailed by extant media laws.

Such contradictions beg the important question: What is the purpose and rationale behind the advocacy of 21st century skills, including media and digital literacy? Most international frameworks posit that these skills constitute the basis for success in work, life and citizenship; or as then-president of the Partnership for 21st Century Learning enthusiastically put it, “proficiency in 21st century skills is the new
civil right for our times” (Kay, 2010, p. xvii). Yet scholars have been critical of transnationally circulated education policies as primarily geared toward serving the interest of global capital (Rizvi & Lingard, 2010; Ball 2009; 2012). Digital/media literacy in specific is often used by national governments as a ‘policy tool’ (Livingstone, 2008) to optimise their workforce capacity through primarily ICT skills acquisition. In other words, when economic motivations gain primacy over personal and civic empowerment, media and digital literacy as 21st century skills may end up no more than regulatory mechanisms to ensure a tech-savvy and compliant labor force (Druick, 2016).

The tensions created by divergent interests motivating 21st century skills education can be further compounded by local contextual factors. In Singapore, public education is situated at the nexus of various policies, being on the one hand a key vehicle for supplying local (innovative, creative) talent for Singapore’s economic needs (Koh, 2010) and on the other hand being the main institutional platform for nurturing students “into good citizens, conscious of their responsibilities to family, society and country” (MOE, n.d.). Digital and media literacy educators are thus given potentially conflicting mandates to further creativity, which is mainly achieved through fostering collaborative, creative expression through (digital) media, but to do so within a media and education culture that values compliance. Teachers are certainly not unaware of these tensions which may play a role in their reluctance to incorporate creative forms of media literacy education. Yet in the end it is curricula rather than economic policies that provide the basis for the content and pedagogy of school education, though they certainly derive from and strongly align with key national-economic goals. The underrepresentation of creative expressive skills in key policy documents such as the 21st Century Skills Framework and the ICT Masterplan 4, coupled with its secondary place as a learning outcome of English education, sends a strong message to teachers about priorities, which they are very likely to follow. As a result, key 21st century competencies such as communication and creativity, are compromised.
Digital and media literacy education in Singapore thus provides an example of how global education policies such as 21st century skills become locally mediated and interpreted. As the paper argued, creative forms of expression as aspects of digital/media literacy are largely absent from the Ministry’s 21st century framework, and only marginally incorporated within the English language syllabus. This is in alignment with Singapore’s largely conformist education ethos, protectionist public media literacy education initiatives as well as its politically regulated mediascape. At the same time, 21st century skills are infused within local curricula mainly in order to boost the capacity of Singapore’s (future) workforce (cf. Lim, 2014). Further, economic policies are also aggressively promoting information technology as key to creativity and innovation, and as vital for sustained economic growth. The contradictions arising from the largely economic mandate for creativity and 21st century skills on the one hand, and the moral-political mandate for a compliant citizenry on the other, are symptomatic of neoliberal education policies and their domestication in local contexts (Williams et al., 2013). When viewed exclusively from the perspective of either policy or practice, these tensions may not be visible and therefore their impact may be obscured. Studying education policy mobility should thus account not only for the global horizontal networks through which policies flow, but also scrutinise their vertical penetration into local educational realities.

The tensions and contradictions identified in this paper are likely to remain and continue to pose a challenge as Singapore presses on to realise the goals of its 21st century education. Creativity and playful, collaborative experimentation are an important aspect of digital and media literacy. The student data highlighted in this paper, while drawing on a small sample, suggests that it is an area where Singapore youth currently do not excel, as solitary, self-oriented (digital) media activities clearly outweighed those of collaborative sharing and creation. But trying to ‘manage’ creativity betrays its very essence. Whether 21st century skills are fostered for national economic progress, for creating a socially conscious, democratic citizenry or for individual empowerment, digital and media literacy must be
embraced and practiced in its totality, if the educational benefits associated with them are to be fully reaped.

Notes
1 There is no publically available data that compares Singapore schools based on academic achievement. As such, the Primary School Leaving Examination aggregate score was used as a proxy measure of academic achievement. This score is the lowest score that a given secondary school uses as the cut-off point for admission into its various streams.

2 The ratio for the elite school was 80% solitary vs 20% social use, whereas the same ratio for the lower-ranked school was 72% solitary vs. 28% social. The difference may have been caused by the fact that students in the elite school reported more frequent use of print media (books, newspapers) than their peers in the other school.

References


**APPENDIX**

1.0 In this section, we ask you to tell us what you think Media Literacy education is about. For each question, please select only one response.

1.1 Media Literacy education teaches students to process and comprehend messages in media texts.

- Strongly Agree (1)
- Agree (2)
- Somewhat Agree (3)
- Somewhat Disagree (4)
- Disagree (5)
- Strongly Disagree (6)

1.2 Media Literacy education teaches students to analyse the effects of messages on readers / viewers of media texts.

- Strongly Agree (1)
- Agree (2)
- Somewhat Agree (3)
- Somewhat Disagree (4)
- Disagree (5)
- Strongly Disagree (6)
1.3 Media Literacy education teaches students to evaluate the credibility of media texts.
- Strongly Agree (1)
- Agree (2)
- Somewhat Agree (3)
- Somewhat Disagree (4)
- Disagree (5)
- Strongly Disagree (6)

1.4 Media Literacy education teaches students to appreciate the aesthetic design of media texts.
- Strongly Agree (1)
- Agree (2)
- Somewhat Agree (3)
- Somewhat Disagree (4)
- Disagree (5)
- Strongly Disagree (6)

1.5 Media Literacy education teaches students to utilize media to engage in social and global issues.
- Strongly Agree (1)
- Agree (2)
- Somewhat Agree (3)
- Somewhat Disagree (4)
- Disagree (5)
- Strongly Disagree (6)

1.6 Media Literacy education teaches students to actively create media texts.
- Strongly Agree (1)
- Agree (2)
- Somewhat Agree (3)
- Somewhat Disagree (4)
- Disagree (5)
- Strongly Disagree (6)

1.7 Media Literacy education teaches students to be responsible media users.
- Strongly Agree (1)
- Agree (2)
- Somewhat Agree (3)
- Somewhat Disagree (4)
- Disagree (5)
- Strongly Disagree (6)
1.8 In addition to traditional print media and digital forms of media, Media Literacy education should involve literary texts.
- Strongly Agree (1)
- Agree (2)
- Somewhat Agree (3)
- Somewhat Disagree (4)
- Disagree (5)
- Strongly Disagree (6)

1.9 For media literacy education to be effective, teachers need to understand the media habits of their students.
- Strongly Agree (1)
- Agree (2)
- Somewhat Agree (3)
- Somewhat Disagree (4)
- Disagree (5)
- Strongly Disagree (6)

1.10 Media Literacy should be a required subject in Singapore secondary schools.
- Strongly Agree (1)
- Agree (2)
- Somewhat Agree (3)
- Somewhat Disagree (4)
- Disagree (5)
- Strongly Disagree (6)

1.11 Media Literacy is best taught in Singapore secondary schools through English Language as opposed to other subjects.
- Strongly Agree (1)
- Agree (2)
- Somewhat Agree (3)
- Somewhat Disagree (4)
- Disagree (5)
- Strongly Disagree (6)
3.15 Which of the following aspects in Media Literacy do you cover as part of the teaching of English? Choose all that apply.

- Persuasion, point of view and stereotypes in media (1)
- Quality and credibility of media content (2)
- Responsible media use (3)
- Cyber wellness (4)
- Artistic and design aspects of media texts (5)
- Technological/IT skills (6)
- Others: Please state accordingly, or enter 'N.A.'

4.1 On average, in the past 12 months, how often have you assessed Media Literacy in your teaching of English via the following? (Please make sure to indicate your response to ALL options including 'Others')

<table>
<thead>
<tr>
<th></th>
<th>Very frequently (1)</th>
<th>Frequently (2)</th>
<th>Somewhat frequently (3)</th>
<th>Somewhat rarely (4)</th>
<th>Rarely (5)</th>
<th>Never (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of a media resource (e.g. video clip)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Journal reflection</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Portfolio</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Student presentation</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Written test / examination</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

5.0 In this section, please tell us your personal views about the teaching of Media Literacy in Singapore.

5.1 What is/are the key challenge(s) for you in incorporating Media Literacy in the teaching of English?

5.2 Is it important for you that Media Literacy be taught in Singapore secondary schools? Please elaborate.

FIGURES

Figure 1. Daily media use by type among secondary students.
### Table 1. Aspects of media literacy covered by teachers in their EL teaching

**Which of the following aspects in Media Literacy do you cover as part of the teaching of English? Choose all that apply.**

<table>
<thead>
<tr>
<th></th>
<th>Persuasion, point of view and stereotypes in media</th>
<th>Quality and credibility of media content</th>
<th>Cyber wellness</th>
<th>Responsible media use</th>
<th>Artistic and design aspects of media texts</th>
<th>Technological/IT skills</th>
<th>Others: Please state accordingly, or enter ‘N.A.’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Persuasion, point of view and stereotypes in media</td>
<td>Quality and credibility of media content</td>
<td>Cyber wellness</td>
<td>Responsible media use</td>
<td>Artistic and design aspects of media texts</td>
<td>Technological/IT skills</td>
<td>Others: Please state accordingly, or enter ‘N.A.’</td>
</tr>
<tr>
<td>1</td>
<td>194</td>
<td>96%</td>
<td>147</td>
<td>72%</td>
<td>106</td>
<td>52%</td>
<td>104</td>
</tr>
</tbody>
</table>

#### Diagram:

Percentage of students who use this media at least once a day (n=32)

- **Social networking sites:** 90.6%
- **Other websites:** 78.1%
- **TV:** 75%
- **Mobile music:** 68.8%
- **Online videos:** 68.7%
- **Mobile games:** 21.9%
- **Print newspaper:** 18.6%
- **Fiction/literary text:** 100%

### Notes:

- The diagram illustrates the percentage of students who use various media at least once a day.
- The data is based on a sample of 32 students.
- The categories include social networking sites, other websites, TV, mobile music, online videos, mobile games, print newspaper, and fiction/literary text.
Table 2. Type and frequency of assessment of media literacy in previous 12 months.

<table>
<thead>
<tr>
<th>#</th>
<th>Question</th>
<th>Very frequently</th>
<th>Frequently</th>
<th>Somewhat frequently</th>
<th>Somewhat rarely</th>
<th>Rarely</th>
<th>Never</th>
<th>Total Responses</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Production of a media resource (e.g. video clip)</td>
<td>4</td>
<td>20</td>
<td>44</td>
<td>49</td>
<td>34</td>
<td>51</td>
<td>202</td>
<td>4.20</td>
<td>1.39</td>
</tr>
<tr>
<td>2</td>
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<td>14</td>
<td>39</td>
<td>52</td>
<td>42</td>
<td>34</td>
<td>21</td>
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<td>3.52</td>
<td>1.42</td>
</tr>
<tr>
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<td>Portfolio</td>
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<td>13</td>
<td>35</td>
<td>54</td>
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<td>55</td>
<td>202</td>
<td>4.41</td>
<td>1.30</td>
</tr>
<tr>
<td>4</td>
<td>Student presentation</td>
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<td>68</td>
<td>75</td>
<td>29</td>
<td>10</td>
<td>7</td>
<td>202</td>
<td>2.88</td>
<td>1.11</td>
</tr>
<tr>
<td>5</td>
<td>Written test/examination</td>
<td>41</td>
<td>82</td>
<td>41</td>
<td>17</td>
<td>8</td>
<td>13</td>
<td>202</td>
<td>2.54</td>
<td>1.35</td>
</tr>
</tbody>
</table>