**Metaliteracy in art and design education: implications for library instruction**

**The concept of metaliteracy**

Then term *metaliteracy* is still a relatively new concept since being introduced into the library and information science literature as a ‘framework that integrates emerging technologies and unifies multiple literacy types’ (Jacobsen and Mackey, 2011, 62) It is therefore still a fairly recent addition to the parlance surrounding library instruction and teaching and learning practice, which this chapter will attempt to expand upon. In the first edition of this handbook for art and design librarians there is no corresponding chapter, instead there is a comprehensive ‘teaching and learning’ section with chapters covering themes such as: visual literacy (Gluibizzi, 2010); embedding information literacy (Mayer, 2010); and, using image databases (Roberto and Robinson, 2010). The inclusion of such chapters suggests that as a profession we were still in the habit of regarding individual literacies and talking about them as a group of literacies, although a further chapter does start to discuss how multiple literacies are best served in the art and design library and how librarians need to accommodate how visual and kinaesthetic learners access, organise and utilise information (Wilson and McCarthy, 2010)

At the heart of metaliteracy (in an art and design context) is the acknowledgement that art and design students learn ‘differently’ and that subsequently, this difference needs to be considered when developing information literacy instruction. Writing in 2008, Halverson suggested that there ‘were few, if any, existing formulas in place to create information literacy programs that adequately address the particular and idiosyncratic needs of arts students (Halverson, 2008, 34). Whilst there has been much discussion and development within the area of information literacy for art and design students since 2008, there remains a need to acknowledge the ‘difference’ and to establish learning frameworks accordingly. Greer (2015) considers the notion of art itself within an information literacy context and in doing so reflects upon the artistic practices of: “creating meaning from personal experience; forging connections with larger concepts and cultural references; and encouraging the practice of self-reflection” (Greer, 2015, 84)

**Metaliteracy models**

Within this information literacy context, metaliteracy models lend themselves to arts education and learning, but before expanding upon this, it is first useful to identify which component parts go into such a model. In proposing their *Metaliteracy model to redefine information literacy* Jacobson and Mackey ‘envisage a comprehensive model for information literacy to advance critical thinking and reflection in social media, open learning settings and online communities’ (Jacobson and Mackey, 2013, 84). Indeed it was the need to demonstrate a different type of information literacy within participatory digital and networked environments which led Jacobson and Mackey to form and develop metaliteracy, in order to address the gaps in existing information literacy models and it was social media that provided the catalyst for them to address this and develop further understanding of the ‘complex relationships between researchers, information tools and agency in and through the research process’ (Jacobson and Mackey, 2016, 3)

Literacies such as visual literacy, media literacy, computer literacy and network literacy are all implicit in information literacy in the networked age and have been identified as such for some time (Jacobson and Mackey, 2014, 2-3). The link between these related literacies and the influence that technology has had on information literacy practice is very much accepted and this broader understanding of how students search for and process information within the networked environment is now regarded as metaliteracy in that it begins to embrace a range of other literacies. Within some of the literature it is easy to confuse the term ‘metaliteracy’ with ‘multiliteracy’, and in effect the two are linked. However, by definition, ‘meta’ implies something that is ‘referring to itself’ or is ‘self-referential’ (OED, 2017) meaning that metaliteracy is in effect ‘literacy about literacy’. Jacobson and Mackie (2013) define metaliteracy as ‘requiring individuals to understand their existing literacy strengths and areas for improvement and being able and to make decisions about their learning’ (Jacobson and Mackie, 2013, 2), while ‘multiliteracy’ concerns itself with the ‘interconnections of multiple literacies which involves a higher level of cognitive and linguistic capabilities and critical thinking than does focusing on a single approach’ (Jacobson and Mackie, 2013, 16) . These definitions therefore suggest that a certain level of metaliteracy is required in order to engage in multiliteracies.

The multiliteracies in question for art and design students are numerous and are often discussed and analysed as individual literacies, or within a more holistic information literacy landscape. For example, Daley (2003) recognises visual literacy, communication literacy and media literacy as resonating with art and design disciplines, with particular attention on media literacy as it addresses a wide variety of formats and media including images and sound. Being able to process information in different formats helps students create meaning and media literacy often sits within the broader multimedia learning theory, based on the assumptions that there are two separate channels for processing information (auditory and visual) and that learning is an active process of filtering, selecting, organising and interpreting this information (Mayer, 2009). The cognitive theories associated with metaliteracy and the individual constituent literacies are widely discussed and provide much of the discourse around the changing information literacy landscape in arts education. For example Beatty (2013) details the cognitive theories which sit behind visual literacy and in doing so combines them with the *ACRL Visual Literacies Standards for Higher Education* (Association of College and Research Libraries, 2011), which has become an essential instrument in arts librarians’ understanding and teaching of visual literacy in recent years.

Other literacies which fall into the discussions around metalitercy, and which are particularly significant to the art and design environment in that they complement the multimedia elements of sound and vision, are object and artefact based literacies. ‘Objects can be employed in a variety of ways to enhance and disseminate subject-specific knowledge, to facilitate the acquisition of communication , collaboration, practical observation, drawing skills and inspiration’ (Chaterjee, 2010, 180). Object Based Learning encourages analysis and critical reflection as students are encouraged to read meaning and text within objects and discuss how objects can be interpreted. Such activity tests students’ visual literacy, but as well as this also incorporates other sensory elements such as touch as students explore how objects relate to them and the messages that they communicate (Hardie, 2015). The impact of tactile learning and of haptics (grasping hold of things physically as well as figuratively, rather than simply touching), somatic and sensory learning and how students create meaning from objects through seeing them as metaphors or symbols are all key attributes of Object Based Learning (Chaterjee, 2008) and subsequently require a high degree of metaliteracy from participating students.

However, if we remind ourselves as to the origins of metaliteracy, it was the rise of digital and networked information which led to different understanding of critical information skills and the cognitive behaviours behind them. Godwin (2008, 3-5) attests that the rise of social media and Web 2.0 technologies which emerged during the early part of the 21st century transformed the information landscape in as much as exposure to these technologies completely changed the way in which people find, access and use information. In effect this also fundamentally changed the way in which librarians needed to approach the teaching of information literacy. In their book *Information Literacy in the Digital Age*, Welsh and Wright (2010) suggest that information literacy should now be considered a liberal art which extends from knowing how to use computers and to access information to being able to critically reflect on the nature of information, including its technical infrastructure and its social, cultural and philosophical context (Welsh and Wright, 2010, 3).

Significantly, media literacy addresses the idea of the learner as a producer of information and content, a characteristic which comes through strongly in much of the discussion around metaliteracy. In discussing digital literacies around social media and Web 2.0, Godwin (2008) and Welsh and Wright (2010) identify how user generated content and information is at the heart of Web 2.0 and as such completely changes users’ understanding of information literacy.

As has been established in this section, the meta-perspective is distinct from acknowledging multiple literacies (although the two are linked). In establishing their metaliteracy model, Jacobson and Mackey (2013) illustrate how the 21st century learning environments are social, multimodal, interactive, and open, requiring an integration of visual, textual, aural, media, digital, and collaborative competencies. It is therefore essential that the fundamental elements of information literacy (determining, accessing evaluating, incorporating, using, and understanding information) are acknowledged within the literacy types which are now recognised within a metaliteracy framework, namely: visual literacy, media literacy, digital literacy and cultural literacy (Jacobson & Mackey, 2013, 85)

**What does metaliteracy mean for learning?**

Metaliteracy provides an overarching framework that builds on the core information literacy competencies while addressing the revolutionary changes in how learners communicate, create and distribute information in participatory environments. Central to the metaliteracy model is a metacognitive component that encourages learners to continuously reflect on their own thinking and literacy development in these fluid and networked spaces (Jacobson and Mackey, 2013, 84). Whilst the focus of this chapter is not on learning theories it is difficult to discuss metaliteracy without acknowledging some theoretical frameworks which pertain to it. As already discussed, metaliteracy places an emphasis on technology, networked information and multiple literacies culminating in knowledge acquisition instead of just skills development. Metaliteracy therefore requires a high level of understanding of one’s own knowledge and cognitive abilities. This is metacognition, which Hartman (2002) argues ‘is generally defined as cognition about cognition, or thinking about one’s own thinking, including both the processes and the products’, which in turn has a significant impact on ‘acquisition, comprehension, retention and application of what is learned, in addition to affecting learning efficiency, critical thinking and problem solving (Hartman, 2002, xi)

Essentially, metaliteracy requires an understanding of one’s own literacies and how they interlink, and in doing so acknowledges the existence of multi-literacies. The metaliterate individual is effectively demonstrating metacognition in the ways that they discern between sources of information and how they critique, analyse and read meaning into these. The complexity of applying this understanding of one’s own learning and thinking processes and interrelated competencies is theorised by Gardner (1983) in his theory of multiple intelligences, which differentiates intelligence into specific ‘modalities’ rather than seeing intelligence as dominated by a single general ability. Gardner’s different intelligences include: musical-rhythmic; visual-spatial; verbal-linguistic; logical-mathematical; bodily-kinesthetic; interpersonal; intrapersonal; and naturalistic. Even at a basic level, one can see that being able to segment intelligences in this way and understand that one is able to use different intelligences requires metacognition to be present. Gardner opposes the idea of labelling learners to a specific intelligence, but maintains that his theory of multiple intelligences should empower learners and not restrict them to one modality of learning (McKenzie, 2005).

Applying metacognition and multiple intelligence theories to metaliteracy practices helps us to better understand metaliteracy and what it means for learning, and in effect this is a continuation of the existing discussions around information literacy and learning styles theories. Discussing this in relation to information literacy teaching Blanchett, Powis and Webb (2012, p.19) suggest that learning styles theories are linked to discussions of personality and individual difference, including theories of multiple intelligence. They also highlight that critics of learning styles theory suggest that there is limited evidence of their actual impact with regard to teaching and learning. Such a stance is difficult to justify in an arts education environment where visual and kinaesthetic learning styles have proved to be dominant and along with the theories of metacognition and multiple intelligences, learning styles need to be accommodated when developing the metaliterate learner. This is even more the case in the arts, and whilst it is important not to stereotype arts students and practitioners to these specific learning styles there is evidence to suggest that they need to be taken into account.

To fully consider what metaliteracy means for learning in an art and design environment, it is useful to look at some of the thinking about how it is taught. Elkins (2001) points out, there is a long history within western thought stretching back as far Plato and Aristotle that contends art cannot be ‘taught’ at all. He identifies four things that can be taught in art classrooms including art criticism and theory, professional skills, visual acuity and technique, but also highlights that these fall short of expressing either what actually happens in art instruction or what is deemed most important.

In a study which looked specifically into art and design teaching, data was collated from a series of interviews with tutors across four subject areas to identify a set of ‘signature pedagogies’ associated with art and design education (Shreeves, Sims and Trowler, 2010). Using Schulman’s definition, signature pedagogies describe the fundamental ways in which future practitioners are educated across three dimensions: operational acts of teaching, assumptions about best ways of imparting knowledge and know-how, and underlying beliefs about attitudes, values and dispositions (Schulman, 2005). In their study*,* Shreeves and colleaguesidentified the following key aspects of art and design teaching and learning:

* Learning has a material and physical dimension: requiring engagement with material and development of ideas through media such as sketch-books or performance, and also ‘whole person’ engagement including mind, emotions and senses.
* Learning involves living with uncertainty and unknown outcomes: challenging to students and sometimes to tutors who have to support their uncertainty.
* Learning has a visible dimension: learning products exist as artefacts and are often open to public scrutiny which enables dialogue about the learning process.
* Aspects of learning take into account the audience: the creation and performance of work is carried out with an audience in mind.
* The intention is to develop independent creative practitioners: the tutor’s role is to foster individuals who understand where they and their work fits within a practice.
* Learning is fundamentally social: practice is visible and discussed.
* Process is important and developmental: student and tutor interaction often centres on work in progress.

These features of art and design teaching and learning validate the requirements for art and design students to demonstrate high levels of metaliteracy in order to navigate through their varied learning environments and understand how their learning is working and evolving.

Teaching and learning in art and design is ultimately about supporting students to find their own way to be an artist or designer. Similarly, students’ understanding of how they themselves learn, feeds into this. Winters introduces the concept of ‘meta-learning’, (which by definition is learning about learning) and ‘how it can be used to make subject characteristics and expectations of the art and design teaching and learning context more explicit to students’ (Winters, 2011, 91). Metalearning is essentially concerned with developing an awareness of oneself as a learner and using this knowledge to improve as a learner. This is in keeping with the features identified above by Shreeves and colleagues and reinforces how metaliteracy enables art and design students to develop as independent, critical, creative, reflective and connected metacognitive learners.

**What does metaliteracy mean for art and design librarians?**

‘Expert teaching includes mastery over a variety of teaching techniques, but unless learning takes place, they are irrelevant’ (Biggs and Tang, 2011, p. 20) It is essential, therefore that art and design librarians understand how their students learn; how metaliteracy and metalearning impact on their learning; and how to adapt their own teaching practices to accommodate this. There is an evolving concept of the information literacy landscape, as introduced by Lloyd (2010) which helps to frame how librarians might approach their library instruction and information literacy teaching in the digital and metaliterate age and this can be particularly helpful to art and design librarians. Secker and Coonan (2013) discuss the different strands that make up their ‘New Curriculum for Information Literacy’ (ANCIL) and covers the development of academic literacies in students and mapping and evaluating the information landscapes. ANCIL involves developing a reflective learning framework for students and it is reflection upon the multimodal elements of their learning that requires art and design students to develop metaliteracy skills.

It is the application of metaliteracy within the very broadest information literacy frameworks in which art and design librarians now need to immerse themselves. In discussing the emergence of multiliteracies within the information literacy landscape, Lloyd suggests that ‘the focus is not only on text, but also on visual, audio, spatial and electronic mediums…and this has challenged the autonomous and technical views of literacy’ (Lloyd, 2010, 14). In addressing the key academic literacies which students need to develop the librarian must take into account the multimodality of information and how students make meaning from different sources through their reflection: Rockenbach and Fabian describe how this participatory and interactive learning ‘forces information professionals to rethink their role in the flow of information and suggests responsibility for nurturing a new range of skills and literacies such as higher level critical thinking skills, problem-based enquiry and visual literacy’ (Rockenbach and Fabian, 2008, 28)

In brief, art and design librarians need to approach metaliteracy in the same way in which any arts educators would. For example, ‘using a broad range of exploratory, connective and experimental modes in a continuous process of finding out, trying out and evaluating is a central component in studio teaching and learning and echoes the nature of art and design as a field, where no fixed methodology for inquiry exists’ (Winters, 2011, 93). Librarians must adopt the same flexibility and approach to their teaching, ensuring that the focus is on students’ experimenting, discovering meaning and reflecting in order for leaning to take place.

The critical thinking, reflective and communication skills associated with metaliteracy has led to an environment in which librarians are now encouraged to share successes: in visual literacy and digital literacy strategies; in collaboration models; in object based teaching practices; in creative approaches to information literacy; and, in professional development opportunities in general.

**Conclusion**

This chapter has introduced the concept of metaliteracy and has done so through looking at it through an information literacy landscape framework and also alongside a number of learning theories. Through approaching the subject of metaliteacy in this way it is easy to see how being able to understand one’s own literacies and learning practices is essential for art and design educators and students themselves. In embracing arts education, art and design librarians must fully exploit their position of being at the heart of student learning and ensure that the needs and requirements of their highly metaliterate students are accommodated and considered at every stage of their interaction with library services, support and resources. This is particularly important in the development and design of teaching and instruction sessions as metaliteracy becomes increasingly prolific within the information literacy landscape.

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