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Translation and Translatability in Intersemiotic Space

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Acquisition of artistic literacy in multimodal learning via intersemiotic translation

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ABSTRACT

The topic of teaching competence in artistic perception in school curricula has been investigated in the fields of education (Kindelan 2012), psychology (Vygotsky 1991), and semiotics (Ojamaa et al. 2019). Previous scholarship emphasizes the need to offer learners the opportunity to develop meaning-making abilities concerning different types of artistic texts. They also emphasized the educational value of establishing communication with and by means of such texts. This paper argues the educational value of acquiring artistic literacy in school education in the context of digital culture. We consider this acquisition process as the development of meaning-making abilities in relation to artistic texts and fostering learners' ability to use artistic literacy as a symbolic psychological tool (Vygotsky 1978). We address this question by accentuating the role of semiotic mediation of artistic literacy. At the same time, we argue that artistic literacy acquisition can be established through intersemiotic translation among various multimodal artistic texts. In a practical sense, the paper attempts to develop a methodological framework for acquiring artistic literacy, conceptualized in terms of contemporary educational skills and competences. This paper also analyses the process of acquiring artistic literacy in relation to mediation in learning, the representation of texts, artistic work, and educational assessment. The analysis keeps account of the Tartu-Moscow Semiotic school framework and Lev Vygotsky's theoretical framework, especially in addressing artistic work in education (Vygotsky 1971, 1978, 1991).

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1. Introduction

The competence of using diverse artistic languages in learning has been the focus of various research in educational practices (e.g., Scolari 2018; Vygotsky 1991). Moreover, the ability to use artistic languages in learning has been recently emphasized within the development of new media (Scolari 2018: 802) as a mediation of learning material. Mediation with diverse artistic languages requires school environments to establish meaningful communication through artistic texts in learning.

The digital change in learning material mediation has greatly influenced recent education research (Papadopoulou and Avgerinou 2019). Recent studies have emphasized the educational value of shaping a holistic understanding of contemporary literacies (Scolari 2018; Sukovic 2016). Therefore, to identify the role of artistic perception in contemporary educational competences, it is necessary to develop a coherent framework of artistic literacy, which includes the acquisition of varied skills and competences needed for the meaning-making of diverse artistic languages.

The question of framing artistic literacy in contemporary cultural and educational environments is addressed by synthesizing Lev Vygotsky's research (1991, 1971), which addresses the use of the artistic process in education and psychological development, with contemporary research in media and education (Sukovic 2016; Scolari 2009, 2018). In this paper, I also consider applying the semiotics of culture as an educational framework for developing skills and competences essential for contemporary education (Ojamaa et al. 2019).

This paper aims to develop a theoretical framework of artistic literacy in relation to contemporary educational demands. It will (1) provide an overview of Lev Vygotsky's argument on the value of artistic process in learning; (2) identify artistic literacy within the educational process as a generalized psychological tool (Vygotsky 1978); (3) identify the role of artistic literacy in meaning-making of diverse media in a learning environment, and (4) analyze methodological aspects of acquiring artistic literacy in the process of intersemiotic translation and in a dialogic space.

In a practical sense, this paper attempts to develop a methodological framework for acquiring artistic literacy in school education. Consequently, it offers an analysis of aspects of acquiring artistic literacy in a media environment. The paper also identifies the role of the artistic and creative processes in learning. As a necessary part of the methodological framework, the paper also addresses the issue of evaluating the acquisition of artistic literacy.

This paper's theoretical arguments are illustrated through the educational course 'Language of music.' It was created as an educational and research project to develop a methodology of fostering the meaning-making of music as an artistic language in school education. The 'Language of music' methodology incorporated semiotic, media, and

education research to develop a coherent educational environment. 'Language of music' was used as an optional course in school № 225 in Saint Petersburg, with an average audience of 16-20 pupils of 14-15 years old with no previous musical education.

The paper's arguments, which are related to digital learning, were illustrated using the online platform 'Education on Screen' (Ojamaa et al. 2019). The platform was developed by the Transmedia research group at the University of Tartu¹. 'Education on Screen' provides learning materials based on famous Estonian literary works for schools and gymnasiums for various school subjects, such as literature, history, social and cultural studies, and natural science. An essential characteristic of the platform is the use of the semiotics of culture and transmedia practices in its teaching methodology (Ojamaa et al. 2019). The educational platform is also focused on developing competences and skills, which reflect modern educational needs.

2. Artistic literacy and educational competences

The development of competence in artistic perception, or as Vygotsky called it "the culture of artistic perception" (1991: 292), is considered a part of school curricula in aesthetic education. The recent development of digital media in the mediation of learning material (Scolari 2009, 2018; Kress 2003) emphasizes a necessity to reframe artistic perception as competence of meaning-making in diverse learning material. The following section reviews previous research that established framing artistic literacy in education as a means to develop new competences and skills.

2.1. Previous research in artistic literacy

The development of artistic perception has been emphasized by various research works in education (Kindelan 2012), psychology (Vygotsky 1991; Lindqvist 2003), and semiotics (Ojamaa et al. 2019). Semiotic research has identified artistic languages' role as sign systems in learning by analyzing 'symbolic forms' (Semetsky and Stables 2014: 21) in meaning-making. Thus, a semiotic perspective requires educational methodologies to consider various symbolic forms in developing an educational environment. In his research, Scolari (2009, 2018) has also identified the vital role of new media in mediating learning materials and developing new skills and competences, including digital and

¹ The Transmedia research group developed the online educational platform 'Education on Screen' (Ojamaa et al. 2019) at the University of Tartu as a [research project](#).

'Education on Screen' includes a series of learning environments, which concern famous Estonian novels and their film adaptations: 'Literature on Screen' (about Andrus Kivirähk's novel November), 'History on Screen' (about Leelo Tungal's novel Little comrade), and 'Identity on Screen' (about the first volume of A.H. Tammsaare's novel Truth and Justice).

media ones. Various research in the semiotics of culture (Ojamaa et al. 2019) has also addressed the role of artistic languages in education as a cultural knowledge source.

The educational value of developing an ability to perceive texts of artistic languages was emphasized in Vygotsky's research (1991) as "it teaches [students how] to acquire a system of emotional experience" (Vygotsky 1991: 288). Vygotsky argues that working with artistic texts and fostering "the culture of artistic perception" (Vygotsky 1991: 292) in schools forms a significant part of psychological and emotional development. Thus, Vygotsky accentuates the psychological role of artistic texts, e.g., pictures, as a means of communicating feelings and emotions. The way artistic work changes in psychological development, moreover, illustrates a shift in the role of sign operation in cognitive functions and other psychological processes.

One of the most significant works in developing a notion of artistic literacy was made by Nancy Kindelan (2012), who analyzed artistic literacy acquisition via theatrical works of art. In her research, she argues that artistic literacy represents a capacity "to see, experience, and understand a theatrical work of art [...] and to interpret metaphorical images that can illuminate the psychology of characters" (Kindelan 2012: 7). Kindelan also emphasizes that artistic literacy can be developed "by providing humanizing, synthesizing, and expressive learning opportunities across the curriculum" (2012: 58-59). The acquisition of this literacy can be pursued with "the use of specialized vocabularies, unique methods of inquiry, and experiential practices that lead to practical ways of describing, interpreting, and appraising the world" (ibid.). Kindelan underlines the importance of "cultural understanding and civic responsibility" (2012: 118) in artistic literacy development and his research provides a useful framework for developing a notion of artistic literacy. However, the emergence of new educational literacies requires framing artistic literacy in connection with new skills and competences.

The development of artistic perception has been differently addressed by various research. This diversity of research emphasizes the vital role of artistic perception as a meaning-making tool and illustrates the difficulty of developing a coherent notion of artistic literacy.

2.2. Cultural change and new literacies

Developing the notion of artistic literacy in the framework of contemporary education and a media-rich environment requires framing artistic literacy in a new 'literacy landscape' (Stordy 2015). On the one hand, artistic literacy presupposes the ability to work with diverse artistic languages, including new media languages. It also requires the acquisition and development of competences to use artistic languages for meaning-making in relation to varied educational demands. This understanding of artistic literacy

can be related to its conception by Stordy as a “literacy where social practices and digital technologies are central” (Stordy 2015: 469; Livingstone 2003).

The development of new forms of media, and more diverse use of them in mediating learning material, necessitates the development of new skills and competences that can reflect current educational needs (Sukovic 2016). As Susana Sukovic argues, ‘[n]ew literacies capture many of the complexities of living, learning, and working in the contemporary information world, pointing toward a need to develop a broad base of skills, abilities, and knowledge’ (Sukovic 2016: 5). The most emphasized literacies in the contemporary educational literacy landscape (Sukovic 2016: 2-5; Scolari 2009, 2018; Stordy 2015) are:

- **multiliteracies**

Multiliteracy is considered as the “ability to interpret discourses from different media and languages” (Scolari 2009: 590), and addresses “the increasing multiplicity and integration of significant modes of meaning-making, where the textual is also related to the visual, the audio, the spatial, the behavioral, and so on” (Cazden et al. 1996: 64; Sukovic 2016);

- **digital and information literacies**

Digital and information literacies include an ability to work with varied information across diverse digital resources (Sukovic 2016: 3), thus consequently developing “the ability to make and share meaning in different modes and formats; to create, collaborate and communicate effectively and to understand how and when digital technologies can best be used to support these processes” (Sukovic 2016: 3; Hague and Payton 2010: 4). As digital media becomes a part of everyday life, these literacies are now regarded as a necessary part of educational curricula (Sukovic 2016: 3-5; Republic of Estonia Ministry of Education and Research 2014);

- **metaliteracy**

Metaliteracy reflects a function of metacognition (Briñol and DeMarree 2012) and represents the ability to reflect on our learning abilities (Sukovic 2016: 5). Metaliteracy can be considered a crucial educational competence in analyzing self-progress in learning and is essential for life-long learning;

- **media and transmedia literacies**

Media literacy (Livingstone 2004; Scolari 2018) presupposes an ability to “decode audiovisual media” (Livingstone 2004) in the modern media environment. Media literacy is understood as “the ability to access, analyse, evaluate, and create messages in various forms” (Livingstone 2004). The practical dimension of media literacy has been researched by Scolari (2018), who analyzed the acquisition and development of media and transmedia literacy skills, understood “as a series of competences related to digital interactive media production, sharing and consumption” (Scolari 2018: 805).

A certain level of complexity in developing new literacies in educational curricula posed a necessity for creating a unifying concept of transliteracy (Sukovic 2016), which is a “fluidity of movement across the field - between a range of contexts, modalities, technologies, and genres” (Sukovic 2014: 207, 2016: 7). A concept of transliteracy “comes to the fore in information- and technology-rich environments, so it is based on information and ICT (information and communications technology) capabilities” (Sukovic 2016: 29). The concept of transliteracy does not merely emphasize the necessity to synthesize various new literacies in learning but “also encompasses creativity, critical thinking, communication and collaboration” (ibid.) as necessary educational outcomes.

2.3. Artistic literacy in the development of new competences and skills

The various new media used in education and emerging new educational competences and skills require framing artistic literacy as a part of transliteracy. In other words, it is necessary to describe artistic literacy as an ability to use artistic languages for the meaning-making of various artistic texts in learning, including new media texts. Artistic literacy also requires the consideration of the use of artistic languages in “information- and technology-rich environments” (Sukovic 2016), as well as for developing “creativity, critical thinking, and communication and collaboration” (Sukovic 2016). Therefore, this learning experience can foster the growth of various educational competences, such as critical analysis, creative work, or problem-solving (Kindelan 2012; Sukovic 2016). As a result, artistic literacy should not be seen merely as a separate educational literacy but also as an integral part of the transliteracy landscape.

Our framework requires educational methodologies to consider fostering learners’ abilities in the practical use of artistic languages (including digital media) in digital culture since the development of “information and technological skills should be the top priority of education” (Sukovic 2016: 5). From an educational perspective, digital media’s multimodality becomes a normal form of representation for learners, as “digital technologies are their natural environment” (Sukovic 2016: 5). Moreover, contemporary educational curricula’ demands require “improving problem-solving skills through active rather than passive learning and enriching cultural understanding and civic responsibility through problem-based inquiry” (Kindelan 2012: 118).

3. Vygotsky’s understanding of artistic literacy

Analysis of artistic literacy in the context of educational practices requires describing it within developing psychological functions in learning. In the following section, we analyze how Vygotsky’s understanding of using artistic work in education shapes the concept of artistic literacy and facilitates the understanding of artistic literacy as a psychological tool in learning.

In researching artistic literacy we chose Lev Vygotsky's theoretical framework² (1978; Kozulin et al. 2003) due to its ability to coherently synthesize the development of symbolic mediation and the use of artistic work in learning. His approach is useful not merely for framing the notion of artistic literacy, but also for developing contemporary educational methodologies and learning environments, including digital ones, for acquiring artistic literacy in learning.

3.1. Artistic work in education

3.1.1. COMMUNICATIONAL SIDE OF ARTISTIC WORK

The process of creating texts is a part of understanding its language. As Vygotsky argues, the educational value of artistic work in learning “grows as a tool of fostering perception of artistic works” (1991: 291). This perspective requires educational methodologies to consider creating artistic texts as a part of acquiring artistic perception. Vygotsky (ibid.: 289) argues that creating artistic texts can be viewed as a psychological process, accentuating, thus, its communicative functions. According to Vygotsky (ibid.: 289), young children make pictures not from an aesthetic perspective, but rather as a means of communicating emotional and psychological information through inner speech. For instance, picture proportions produced by younger children do not have to be natural; instead, the proportions reflect parts of reality that are psychologically significant for a child to communicate. This argument emphasizes the communicational and psychological side of using artistic work in learning. Thus, in an educational sense, creating artistic texts should accentuate the context, and not the art itself. Therefore,

² **Lev Vygotsky** (1896-1934) was a psychologist who researched the psychology of learning and education. His works became well-known in the English-speaking audience after his work ‘Thought and Language’ (1986), published in 1962 (Vygotsky 1978). Another important book published in English in 1978 was ‘Mind in society: The development of higher psychological processes,’ which was edited by Michael Cole and ‘reflect[s] various aspects of “reading Vygotsky”’ (1978). One of the most significant of Vygotsky’s contributions to psychological and educational science is his understanding of human psychological and cognitive development as a socio-cultural process (Kozulin et al. 2003). According to Vygotsky, this form of development occurs in the internalization of social functions through various symbolic forms of mediation, such as speech and ‘psychological tools’ (Kozulin et al. 2003). The relevance of Vygotsky’s works for contemporary science belongs to his fundamental view of “the nature of knowledge used in the classroom, for example, knowledge as information versus knowledge as concept formation” (Kozulin et al. 2003: 1-2). He also provided a coherent understanding of the relationship between learning, psychological development, and the acquisition of socio-cultural tools, including symbolic sign systems. Vygotsky’s contribution to semiotics relates to his research about mediation in learning. In his works, he analyzed two forms of mediation— symbolic (psychological tools) and human (zone of proximal development) mediation, which possess a significant role in human psychological development (Kozulin 2003, Vygotsky 1978). In his research, Lev Vygotsky emphasizes an essential link between psychological development and sign operation acquisition. In other words, Vygotsky accentuates the acquisition of symbolic mediators of different origins as a critical part of psychological and cognitive development. According to Vygotsky, the development of sign operations and the internalization of social communication allow us to use such sign systems for managing behavior (Ivanov 1962). Vygotsky’s influential *The psychology of art* (1922), develops a useful framework for analyzing artistic work in relation to learning and socio-cultural development, which serves as the basis for the current research as providing coherent links and unity of semiotic, psychological, and educational processes.

creating artistic texts should not be considered a process of merely developing artistic skills. The artistic work in learning emphasizes the mediational, e.g., communicational, functions of artistic texts, which are a product of learning.

From Vygotsky's perspective, the communicational side of artistic work in education represents an essential dimension of psychological development. The meaning-making of this communication requires developing competence in analyzing an artistic language as means of communication and developing practical skills of maintaining this communication. However, artistic work as a form of learning should not be limited to merely an aesthetic perspective, as the process of teaching artistic skills has to correlate "with a child's own artistic involvement and culture of her/his artistic perceptions" (Vygotsky 1991: 292). Thus, mastering artistic skills should not be a part of acquiring a competence of artistic perception. As a creative process can be quite simple, it is more important to establish communication through artistic texts to develop meaning-making. Thus, considering Lev Vygotsky's framework in using the artistic process in education (1991, 1971), the development of artistic literacy should not be limited to acquiring aesthetic abilities as it would minimize the value of the communicative side of artistic languages, i.e., an ability to convey meanings.

3.1.2. LANGUAGE AND FORM IN MEANING-MAKING

The analysis of "aesthetic reactions" (Vygotsky 1991: 293) and an "emotion of form" (Vygotsky 1922: 31) reflects an essential dimension of developing artistic perception (Vygotsky 1991), since, according to Vygotsky, the ability of artistic works to reflect reality and convey meanings is unique. The symbolic forms used for the mediation of artistic works, which go away from an original image, allow the reader to create new meanings (Vygotsky 1922). However, an 'aesthetic reaction' is not limited to the symbolic dimension but is also related to the inner form of artistic work.

In relation to meaning-making, a process of giving "realistic material an aesthetic form" (Lindqvist 2003: 248) means for Vygotsky more than just analysis of a form's outer aesthetic characteristics. What should be analyzed is an artistic emotion, which, in an aesthetic reaction, is modified by the reader's imagination. In other words, "an emotion is individual, and only by means of a work of art does it become social" (Vygotsky 1971: 243; Lindqvist 2003: 248). An analysis of the relationship between an artistic emotion and an artistic form is essential in meaning-making of artistic work, as the emotion "creates new and complex actions depending on the aesthetic form" (Lindqvist 2003: 248). This analysis requires artistic literacy to include the ability to distinguish relations among outer and inner artistic form levels.

3.1.3. ARTISTIC WORK / ARTISTIC TEXTS AS A SOURCE OF LEARNING

Despite the argument that “[a]rt differs from science only in its method” (Vygotsky 1922: 27), artistic work relates to a “special way of reasoning” (ibid.: 27). This means an ability to understand artistic texts involving a different form of representation, analysis, and reflection as “understanding artistic work cannot be realized by means of logical description” (Vygotsky 1991: 293). In an educational sense, this argument highlights the need to distinguish between the form and inner meaning (Vygotsky 1922: 26) of artistic work. According to Vygotsky, an artistic work’s aesthetic side requires a way of perception of reality quite different from academic knowledge, as an “artistic work never mediates reality as a coherent whole” (Vygotsky 1991: 275). Thus, an artistic work can be used as a source of knowledge as such; nevertheless, its educative functions appear in the unique process of analyzing an artistic form, which provides features of an original psychological reaction towards a particular work of art (Vygotsky 1971).

Artistic texts convey meaning not merely in a poetic, but also in a psychological form (Vygotsky 1922), thus requiring the development of abilities to identify how the psychological side of a poetic form in an artistic work is related to its overall meaning. A significant feature of artistic work is that it is not made to convey a specific meaning or particular emotional or psychological message. Any initial emotional or psychological reaction is modified by a reader, through the creation of new meanings. The singularity of this meaning-making process reveals the distinctive cultural function of artistic work.

The educational value of developing artistic literacy has a simultaneously psychological, cognitive, and semiotic foundation. According to Vygotsky (1978), the acquisition of sign operation, which “appear[s] as a result of a complex and prolonged process subject to all the basic laws of psychological evolution,” (ibid.: 45) is a significant part of psychological development. One of the first levels of developing sign operation is acquiring natural language as a complex symbolic system (Vygotsky 1978). Various research in cognitive science also identified “interconnection between the topology of the brain and the structure of language” (Jakobson 1980: 10). However, “[t]he greatest change in children’s capacity to use language as a problem-solving tool takes place somewhat later in their development, when socialized speech (which has previously been used to address an adult) is turned inward” (ibid.: 27). This change occurs in the process of internalizing social speech to inner speech, which serves in mediating several complex cognitive functions, for instance, memory, thinking, and learning. This process also allows the development of ‘the dialectical unity of’ (ibid.: 24) sign operation and practical intelligence as an essential part of developing psychological, cognitive, and semiotic functions. Using more abstract symbolic sign systems, such as “different signs, symbols, writing, formulae, and graphic organizers” (Kozulin et al. 2003: 23-24), allows a child to develop a system of cognitive links for developing mediated memory and learning paradigms (Fadeev 2019).

The previous discussion emphasizes the educational value of acquiring artistic languages as a semiotic form of mediation in learning. Artistic languages represent sign systems with a synthesis of abstractiveness and complexity of inner relations. This characteristic makes artistic languages a form of mediation of diverse cultural information in learning and a source of developing sign operation in the course of psychological and cognitive development.

3.1.4. CULTURAL BACKGROUND

The meaning-making of texts, of any sign system, is related to the “context of social, cultural, political, economic, historical practices of which they are a part” (Lankshear and Knobel 2007: 1; Stordy 2015). Therefore, developing artistic literacy as a form of mediation requires identifying how a specific artistic text works in a particular cultural context, and its consequent functions (Torop 2003). Reading artistic texts through artistic literacy results in a different understanding level, influenced by already acquired artistic languages. Thus, when mediation is established in sign systems of artistic languages, a specific cultural competence level is required as an essential component of meaning-making.

Vygotsky (1922: 69) emphasized the vital role of the reader as “part of a culture” (Lindqvist 2003: 248) in creating the meaning of an artistic work. According to Vygotsky, a process of modifying an original artistic emotion, using imagination and historically developed “cultural methods” (ibid.: 248), makes an artistic work social. Our socio-culturally developed “consciousness is the unit which links emotion with meaning” (ibid.: 248). This aspect requires methodologies that consider learners’ socio-cultural environments in the proximal development zone (Chaiklin 2003).

3.2. Acquisition of artistic literacy as a psychological tool

Artistic languages represent sign systems, which work as a symbolic mediation in learning. These sign systems can be acquired in learning as psychological tools, as symbolic links, i.e., mediators, between stimulus and response in learning, memorizing, and perception (Vygotsky 1978: 50-51; Kozulin 1998). Psychological tools possess an essential role in cognitive development as a component of developing sign operation in learning. Therefore, artistic literacy can be considered a special psychological tool. However, unlike a separate sign system, literacy operates with a diversity of sign systems. The educational value of acquiring literacy is that it “changes the entire system of the learner’s cognitive processes” (Kozulin et al. 2003: 24; Vygotsky and Luria 1993).

Vygotsky argues that symbolic mediation “is basic to all higher psychological processes” (1978: 40). In the context of psychological development, one learns to use various symbolic mediators, such as “symbols, writing, formulae” (Kozulin et al. 2003: 23). The use of psychological tools demonstrates how symbolic mediation influences psychological development in terms of learning and memorizing. Psychological tools have different learning and memory functions, such as retaining information or conveying meaning (Kozulin et al. 2003). The acquisition of psychological tools is an integral part of learning, as “[c]ognitive development and learning, according to Vygotsky, essentially depend on the child’s mastery of symbolic mediators, their appropriation and internalization in the form of inner psychological tools” (Kozulin 1998, 2003: 24).

Artistic languages’ ability to convey meaning in cultural context emphasizes the necessity to acquire artistic literacy in learning as a psychological tool. Therefore, the acquisition of artistic literacy in the framework of symbolic mediation helps to address artistic languages as a means of meaning-making in the dialogue with the diverse texts in culture. According to Kozulin et al., “the acquisition of psychological tools requires a different learning paradigm” from learning “content knowledge” (2003: 25). The learning paradigm offered by Kozulin presupposes “(a) a deliberate, rather than the spontaneous character of the learning process; (b) systemic acquisition of symbolic tools, because they themselves are systemically organized; (c) emphasis on the generalized nature of symbolic tools and their application” (ibid.: 25). Another methodological issue is the necessity of mediating meaning as “an essential moment in the acquisition of psychological tools” (Kozulin et al. 2003: 26). According to Kozulin et al. (ibid.: 26), the mediation of meaning is closely related to the cultural convention in which a specific psychological tool is used.

When discussing developing artistic literacy in the digital educational environment, it is necessary to consider “the role of children’s interactions with digital texts and non-digital texts” (Neumann et al. 2017). This is where Vygotsky’s research becomes an essential basis for developing educational methodologies to foster artistic literacy acquisition. According to Vygotsky’s framework, it is possible to suggest that socio-cultural interaction through digital artistic texts in correlation with developing children’s “experiences with cultural tools” (Neumann et al. 2017) is a significant part of fostering meaning-making of diverse artistic languages. The mediation of such forms of interaction becomes a methodological focus in developing meaning-making of various artistic forms, including digital media. Therefore, this methodological focus requires the acquisition of abilities to understand and communicate using digital media, including research and technical skills and cultural and participatory culture competences (Jenkins 2007).

4. Artistic literacy as an intersemiotic translation in a multimodal media environment

4.1. Artistic literacy in a media environment

Educational methodologies are continually changing by using diverse forms of new media (Scolari 2018: 802) in mediating learning material. Recent research (Scolari 2018; Livingstone 2004) has identified a necessity to “investigate the emerging skills and practices of new media users as the meaningful appropriation of ICT into their daily lives” (Scolari 2018: 802; Livingstone 2004: 11). Learning environments - where educational material is mediated with diverse sign systems of digital media - shape our understanding of artistic literacy. Moreover, such learning environments emphasize the necessity of using various forms of media, which possess a significant semiotic capacity to make meanings, as a source of learning (Ojamaa et al. 2019) and develop necessary educational skills competences.

According to Torop (2003), the fact that in the contemporary media environment, cultural texts are often represented across various sign systems, influences the text’s ontology decisively. Consequently, this allows for the “possible existence of various forms of the same texts in different media and discourse” (Torop 2003: 271). The variety of media used by educational methodologies to learn and develop skills and competences necessary for contemporary educational demands is addressed using transmedia practices in developing coherent learning experiences (Ojamaa et al. 2019). In this section, we analyze the characteristics of artistic literacy in a multimodal media environment.

4.1.1. COMMUNICATION ACROSS VARIOUS MEDIA

Given that artistic literacy entails the perception of artistic works as semiotic units, we need to reframe artistic literacy while considering the current ontology of artistic works in culture. According to Torop, “[t]he cultural environment of text is not only discursive but also medial” (2003: 272). A process of cultural autocommunication (Ojamaa and Torop 2015) makes it possible for any cultural text to exist across various media, turning meaning-making into a process of “[e]xternal and internal flow of audiences between different media and within media environments” (Torop 2003: 272; Jensen 1995: 122).

The process of cultural autocommunication also shapes our understanding of artistic literacy, which involves an ability to communicate meanings across diverse media and through various modalities (Kress 2003; Scolari 2009: 590-592). Simultaneously, cultural autocommunication processes emphasize the need to consider participatory learning practices across multiple media.

4.1.2. MEANING-MAKING OF MULTIMODAL ARTISTIC TEXTS IN LEARNING ENVIRONMENTS

An essential characteristic of digital learning environments is the representation of information in a multimodal way. According to Shams and Seitz (2008: 5), “perceptual and cognitive mechanisms have evolved for, and are tuned to, processing multisensory signals” meaning “encoding, storing and retrieving perceptual information is intended by default to operate in a multisensory environment”. Educational practice has proved efficient at developing multisensory educational experiences over “unisensory training schemes” (ibid.: 5).

Multisensory representation offers a more effective learning environment, whereas unisensory mediation is a relatively “artificial mode of information processing” (Shams and Seitz 2008: 5). A multisensory representation can be approached in an educational sense by considering translation practices that involve multisensory mediation with artistic and natural languages. Some evidence of multisensory connection among natural and artistic languages in meaning-making can be observed in a work of inner speech (Vygotsky 1986; Zhinkin 1998), a concept considered a language-related part of cognitive functions, such as thinking and memory (Fernyhough 2015).

Inner speech develops from social speech in the course of psychological development. It is characterized by predicativity, the agglutination of words and phrases, and the importance of sense over the dictionary meaning of the words (Vygotsky 1986: 243). According to Zhinkin, inner speech, using its particular condensed inner language or “code of inner speech,” is involved in the meaning-making of “outer” languages (Zhinkin 1998: 158-160), including artistic ones. Linguistic elements of the inner speech code connect with imaginative (related to images) representations of reality, of different modalities (Zhinkin 1998: 159-161). Therefore, inner speech is vital in the meaning-making of multimodal outer sign systems, including artistic languages. Inner speech can be considered the semiotic mediation between outer texts and already acquired representations of diverse languages (see Fadeev 2019: 31-32).

Thus, multisensory representations of artistic texts may involve more associative connections with already acquired artistic languages, which leads to enhancing meaning-making in a media environment. Considering the role of multisensory representations in the meaning-making of learning material would require, including it at a methodological level of a learning environment.

4.2. What makes one artistically literate?

To address what makes one artistically literate, we must synthesize the previously analyzed needs of modern education to develop new skills and competences with a process of acquiring artistic perception, i.e., meaning-making of artistic languages and the role of artistic work in learning.

Summarising previous discussions, we can describe artistic literacy as a synthesis of abilities in (1) meaning-making of artistic languages in various modes and across multiple modalities, including digital media; (2) distinguishing between various artistic forms and diverse ways of conveying information; (3) understanding meaning-making characteristics of various artistic forms; (4) maintaining meaningful communication, using various artistic languages; (5) identifying cultural background which is relevant to meaning-making of a particular artistic work; (6) self-reflection, i.e., meta-knowledge, in artistic perception; (7) using artistic languages for a variety of educational needs concerning critical analysis, creative work or problem-solving in learning (see section 2; Kindelan 2012; Sukovic 2016).

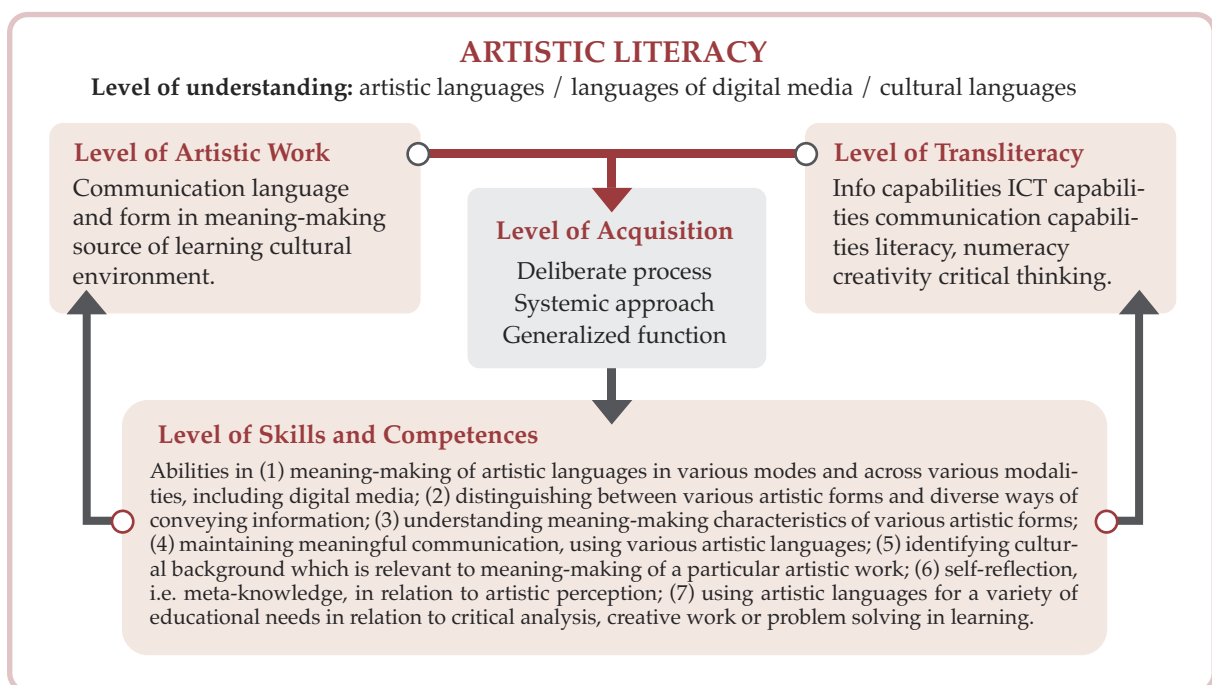


Figure 1. Summary outline of the concept of artistic literacy. The scheme overviews various levels of artistic literacy according to the analysis made in the research.

This framework of what being artistically literate is (see Figure 1) also considers artistic literacy as a part of transliteracy practices, including “working with a multiplicity of resources” (Sukovic 2016: 52). Considering transliteracy practices in the artistic literacy framework involves the use of diverse artistic languages, including languages of digital media, for “communicating and collaborating with different people” (ibid.: 52) and “presenting results of one’s work by incorporating different tones, voices, modalities, formats, and genres” (ibid.: 52). The acquisition of artistic literacy should also consider working with symbolic systems as psychological tools in learning (see chapter 3), because “[s]ymbols may remain useless unless their meaning as cognitive tools is properly mediated” (Kozulin et al. 2003: 24). This approach presupposes a deliberate

process of acquiring artistic literacy, a systemic approach to its analysis, a methodology of learning, and a generalized function of artistic literacy, which allows using artistic languages for diverse educational needs.

4.3. On methodological aspects of acquiring artistic literacy via intersemiotic translation

4.3.1. ARTISTIC WORK AS INTERSEMIOTIC TRANSLATION

As mentioned in section 4.1, the contemporary learning environment is a space where mediation of learning material is established by employing various sign systems, including diverse forms of digital media. From a methodological point of view, we need to examine this form of representation both as meaning-making and as a component of developing artistic literacy.

Any artistic text creates its own semiotic space, where “dialogic relationships” (Dusi 2015: 182) with other texts create meaning. Involvement in these relationships with varied texts - considering the reader’s role in such a relationship (Lotman 1981) - provides more meaning-making sources. It can be suggested that a process of distinguishing between an artistic form and meaning (see section 3.1.2) can be maintained in the process of intersemiotic translation, defined by Roman Jakobson as “an interpretation of verbal signs by means of signs of nonverbal sign systems” (1959: 261; Dusi 2015: 182). Jakobson also associated intersemiotic translation to the notion of ‘transmutation’ (Jakobson 1959; Dusi 2015: 182).

We suggest that the process of intersemiotic translation, which is essential for contemporary culture (Torop 2003), makes it possible to establish connections with already acquired unisensory (Shams and Seitz 2008: 2) representations involved in some cognitive processes such as inner speech (Zhinkin 1998: 146-162). Therefore, it is possible to suggest that intersemiotic translation in learning (Torop 2003) can foster the meaning-making of diverse multimodal texts in a media environment.

Various learning environments represent learning materials using sign systems, which learners cannot always use for meaning-making. We can address this problem by representing or accompanying a less familiar sign system by more familiar or less abstract systems, such as natural languages. For example, when a piece of music is accompanied by pictures, videos, or any media which mediate similar meanings, it makes for a more coherent understanding. Thus, artistic texts can be mediated through other artistic texts or texts of a natural language. In other words, texts of a particular sign system are “translated into different types of texts and effectively become intertexts” (Torop 2003). Therefore, intersemiotic translation becomes an important methodological framework for the meaning-making of artistic texts, allowing learners to use individual socio-cultural experiences.

Involving intersemiotic translation processes in acquiring artistic literacy requires educational methodologies to consider an analysis of intersemiotic space and translatability (Dusi 2015) of artistic texts. We suggest that the analysis of intersemiotic space and translatability as an educational practice can provide a learning experience in distinguishing between artistic forms and their meanings (see section 3.1.2). This multifaceted analysis aims to develop meaning-making of diverse multimodal texts in a learning environment.

Example from 'Language of music'

The educational course 'Language of music' (see section 1) can serve as an example of how semiotics and the translatability analysis of various artistic languages can be used to develop a learning environment, which fosters meaning-making a part of developing artistic literacy in a classroom. The course uses semiotics to provide a learning environment that fosters the meaning-making ability of music's languages to develop artistic literacy. The educational material offers the opportunity to practice skills in analyzing music as a language, i.e., sign system of artistic representation, in various aspects such as style, story, mood, etc. An important methodological aspect of developing artistic literacy is the analysis of translatability between music and different artistic languages. Thus, 'Language of music' uses intersemiotic translation as a valuable part of developing meaning-making in artistic languages.



Figure 2. An example from the educational course 'Language of music' of learners' results in cross-media translation from languages of music to languages of fine-arts of a similar piece of music

Moreover, the course methodology requires an active role of learners in using artistic languages for communication. The course methodology involved several practical sessions, in which learners practiced skills of translating musical texts into other artistic languages. The course methodology did not limit a choice of artistic languages, which could be used for various activities as it offered learners the ability to use more familiar artistic languages for cross-media translation. However, we observed that learners chose fine arts as a preferable form of mediation.

For example, one of the course activities, illustrated in Figure 2, asked learners to analyze various semiotic aspects of a piece of music³ by translating the music into a language of fine arts, i.e., pictures. The example demonstrates that many learners' works possess similar subjective characteristics, such as nature, peacefulness, and loneliness.

Example from 'Education on Screen'

Analysis of learning material from the platform 'Education on Screen' illustrates how we can use the same approach for developing educational methodologies in digital learning. We will proceed to analyze an example from the educational environment 'Literature on Screen' (part of 'Education on Screen'), in which learners practice skills in analyzing some characteristics of film and literary languages using a famous Estonian literature work and its film adaptation *Rehepapp ehk november* (Old Barny aka November) by Andrus Kivirähk.⁴

The methodology of 'Literature on Screen' shows how to use intersemiotic space analysis and the translatability of artistic languages to develop a learning environment that can foster meaning-making as a necessary part of developing artistic literacy. Simultaneously, the example of 'Literature on Screen' helps us see understand how we can use this approach to develop various skills and competences necessary for contemporary education.

For example, in the first part of 'Literature on Screen' (Figure 3), learners practice their skills in analyzing various film language characteristics related to meaning-making— such as color, script, storyboard, sound, or editing.

³ Figure 1 illustrates pictures made by students while listening to 'Chi Mai,' written by Ennio Morricone in 1971.

⁴ Kivirähk's novel *November* and its film adaptation, are overviewed in the educational environment 'Literature on Screen', which is part of the platform 'Education on Screen.'

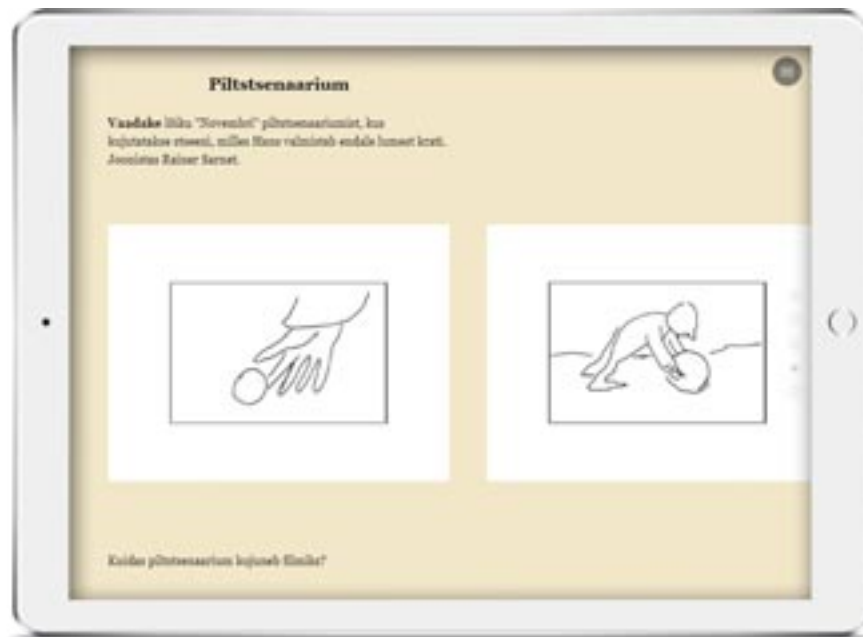


Figure 3. An example from 'Education on Screen' of an activity where learners practice analyzing a storyboard of the film *November*

In the second part of the educational environment (Figure 4), learners analyze similar characteristics in literary language, including such features of meaning-making as fabula, plot, narration, and spacetime.



Figure 4. An example from 'Education on Screen' of an activity where learners practice analyzing the characteristics of literary language, such as spacetime

In the next part (Figure 5), learners examine how a novel and a film relate to each other. This part also shows how these texts function in culture, thus analyzing proto-texts, intertext, metatext, and perception.

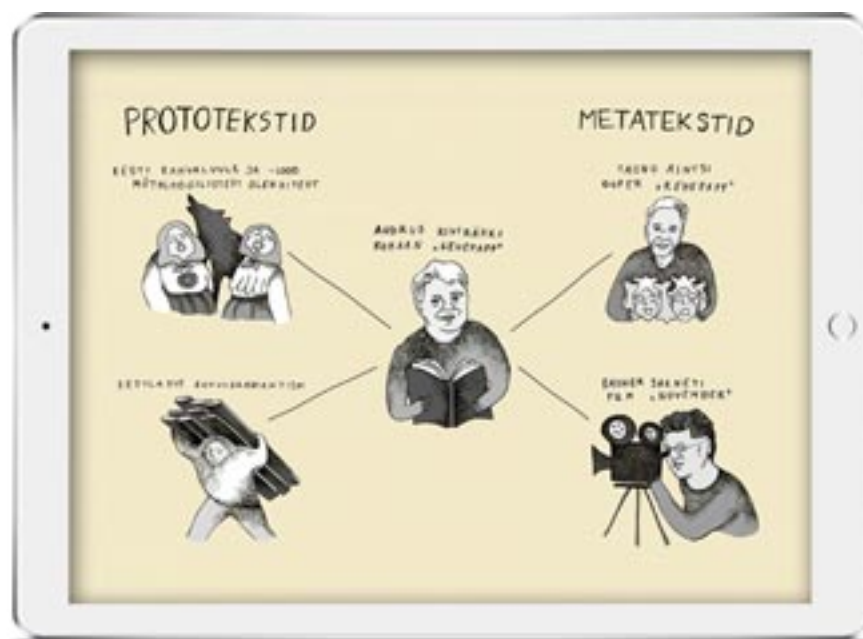


Figure 5. An example from ‘Education on Screen’ of an activity, where learners analyze the novel’s semi-otic space and film *November*

The educational material of ‘Literature on Screen’ provides an opportunity to develop practical skills in mediating various stories employing different artistic languages. ‘Literature on Screen’ also involves analyzing the cultural background of a particular text, which is a significant part of developing meaning-making abilities from diverse artistic languages.

As a result, the methodological approach, in which analysis of intersemiotic space and the translatability of mediated artistic texts are used as an educational practice, allows learners to develop artistic literacy as a psychological tool (see section 3.2). This approach also “encompasses creativity, critical thinking, and communication and collaboration” (Sukovic 2016: 29). Moreover, methodological aspects of ‘Literature on Screen’ provide an example of how digital educational methodologies can address a question of acquiring artistic literacy.

4.3.2. ACQUIRING ARTISTIC LANGUAGES AS LANGUAGES

According to the previous section, involving the translation learning practices in acquiring artistic literacy is a valuable part of developing meaning-making of multimodal media. Methodology dictates that to adopt these learning practices, we need to consider

the various forms of artistic representation as sign systems, i.e., literary language, musical language, or the language of fine arts. This methodological approach would develop an ability to identify an “analogy between functionality and development of a language and art” (Vygotsky 1922: 26). Any artistic text can be semiotically compared with any other text from any sign system as having “outer sound form, secondly, image, or inner form and thirdly meaning” (Vygotsky 1922: 26). According to Zhinkin, artistic languages, or “languages of artistic reasoning,” are formed “in the process of communication and using natural languages” (1998: 162). Zhinkin argues that emotions and feelings are impossible to communicate; what is possible, though, is “to form such a language by means of which it is possible to make a receiver experience these feelings and emotions” (ibid.).

Semiotics can provide an analytical framework to enable the consideration of these forms of analysis for conveying meaning. Considering artistic literacy in the diverse educational demands related to meaning-making of an artistic language, the analysis of artistic literacy should be addressed more broadly and coherently. For instance, in connection to music’s language, what should be considered is not merely a semiotic analysis of a particular musical piece, but rather a more diverse analysis of related languages of musical genres, composing, or performing music. This form of analysis should, in the same way, address various forms of artistic representation as semiotic systems considering such features as semantics, syntactics, and pragmatics. In other words, artistic literacy presupposes an ability to recognize a specific artistic language as a form of semiotic mediation using a particular sign system of artistic representation. According to the examples from the research projects, we argue that an ability to distinguish forms of artistic representation as languages results in fostering intersemiotic translation in relation to artistic languages.

Example from ‘Language of music’

This approach can be illustrated with the methodological characteristics of ‘The Language of Music,’ which included several lessons (Figure 6) designed to provide learners with acquiring the language of music as an artistic sign system. Each lesson focused on analyzing a specific semiotic aspect of musical language, able to convey meaning.

The course’s educational methodology also included an overview of some essential semiotic notions, analysis, and practices of how artistic languages work in communication and meaning-making. Thus, it offered a multifaceted analysis of musical language as a sign system.

In supporting the acquisition of musical language as a sign system in semiotic mediation, the methodology of the course followed Kozulin’s framework of acquiring psychological tools (see chapter 3.2, Kozulin et al. 2003: 25), and therefore considered:

<p>Communication by means of language of music</p>	<ul style="list-style-type: none"> • Introduction to semiotics, signs and languages; • Music phenomena as a communication tool and its development; • Relation between language of music and other artistic languages; • How music is able to convey meaning. • Discussion, 'who possesses a more active role in communication by means of language of music?'
<p>Meaning-making of a musical text</p>	<ul style="list-style-type: none"> • Understanding and misunderstanding of languages of music. • What are some reasons for misunderstanding? • How to avoid misunderstanding of language of music.
<p>Musical dialects</p>	<ul style="list-style-type: none"> • What are musical tastes and do we need to develop them? • Overview of 'musical dialects', styles of music in 20th-21st centuries • Discussion, 'what were some reasons of development of various musical styles?'
<p>Practical session in meaning-making</p>	<ul style="list-style-type: none"> • Practical session. What is the message of a musical text you hear? What makes you understand it? • Collaborative activity and case-study in meaning-making of musical texts.
<p>Individual project presentations</p>	<ul style="list-style-type: none"> • Practical session. Individual projects.

Figure 6. Outline of the 'Languages of Music' course content

(1) the acquisition of the language of music as a psychological tool in the process of deliberate analysis during an intensive course, which includes lectures, seminars, and practical sessions; (2) an analysis of varied features and characteristics of an artistic language in the language of music; and, (3) the use of the language of music for various demands in meaning-making and communication, such as meaning-making of video scenes.

4.4. Evaluation of acquiring artistic literacy as dialogic space

Since the acquisition of artistic literacy as a psychological tool requires a different learning paradigm from the acquisition of content knowledge (Kozulin et al. 2003: 25), it should also require another form of reflection in maintaining necessary educational outcomes. In the following section, we argue for the consideration of developmental processes in acquiring artistic literacy and the use of diverse artistic languages in evaluation to foster the acquisition of artistic literacy.

Considering the functions of artistic literacy in meaning-making, common forms of learning assessment – which are more focused on measuring content knowledge (Kozulin et al. 2003: 25) – would be unable to measure such a multifaceted literacy. As Carol Lidz and Boris Gindis argue, “[w]hat is to be measured, therefore, is a child’s

evolving individual ability to master ‘psychological tools’ that are in the process of development” (2003: 101). This argument corresponds with Vygotsky’s observation in analyzing the zone of proximal development (ZPD) (ibid.: 100). This understanding requires an assessment methodology that considers the specific characteristics of acquiring artistic literacy related to the meaning-making of artistic languages. As a competence of artistic perception may depend on the difference in social situations of development (Chaiklin 2003: 47), a relevant methodology requires an ability to mediate learners’ diverse social, emotional, and cultural backgrounds.

A relevant assessment methodology “should be able to describe the child’s ever-changing ability to learn with assistance or guidance, as well as to assess the individual ‘length’ of ZPD” (Lidz and Gindis 2003: 101). This conception of evaluation methodology is derived from Vygotsky’s notion of dynamic assessment (Lidz and Gindis 2003), which is “an approach to understanding individual differences and their implications for instruction that embeds intervention within the assessment procedure” (ibid.: 99). The concept of dynamic assessment requires an educational methodology to consider possibilities of measuring proximal development within social interaction and the developmental process, which appears from “interactions of a child with culture” (ibid.: 100). Vygotsky also argues that any form of assessment should be inseparable from learning (ibid.: 100-101).

As artistic literacy is considered a part of transliteracy, what we should also assess is the ability to use artistic languages in processes of “creativity, critical thinking, and communication and collaboration” (Sukovic 2016: 29) in multimodal, “information- and technology-rich environments” (ibid.: 29). This assessment conception corresponds with Vygotsky’s dynamic assessment as “[t]he focus of most dynamic assessment procedures is on the processes rather than the products of learning” (Lidz and Gindis 2003: 99).

The involvement of dynamic assessment, which can also reflect the acquisition of artistic literacy, can be addressed by providing learners with an opportunity to critically reflect on a personal learning experience (Moate et al. 2019), and consequently develop metaliteracy (see chapter 2; Sukovic 2016: 5). Such a form of educational practice can be provided in a learning environment by creating a dialogic space (Rule 2004; Moate et al. 2019), which can “explore and develop the quality of thinking together in education and the quality of educational experience” (Moate et al. 2019). Developing a dialogic space in learning requires involving learners in meaningful dialogue by using a relevant “artistic system of languages” (Bakhtin 1981: 416-417). This methodological characteristic emphasizes the educational significance of using a dialogic space to reflect on a level of metalearning. Moate et al. argue that “[d]ialogic space provides a more dynamic conceptualization for development and learning than metaphors such as the Zone of Proximal Development (ZPD) and scaffolding” (2019: 168). Vygotsky’s Zone of Proximal Development would, instead, provide additional value for using a concept

of dialogic space in this framework by emphasizing its psychological value and accentuating social and inner communication in acquiring artistic literacy.

Some methodological and practical approaches to using dialogic space in educational reflection and metalearning can be observed in research related to using arts in education. One such was developed in the framework of 'Beyond Text Project,' established by the University of Chester and "is concerned with bringing Arts-Based Methods practice research into education" (Benmergui et al. 2019: 3). The project's methodology incorporates several artistic methods to be used as ways of "research, assessment, and evaluation" (ibid.) in education. One of the examples offered in the project, which can be used to address a question of assessment in acquiring artistic literacy, uses reflective sketchbooks (Benmergui et al. 2019; Moate et al. 2019) as a part of individual reflection on learning experience (Figure 7). Using sketchbooks in reflecting on an individual learning process means that a learner is sketching all relevant information using mostly artistic languages and showing "individual expressions of dialogic space" (Moate et al. 2019: 169). Despite being "a well-established feature in teacher development" (ibid.: 167), reflection practices in learning continue to represent "a highly personal activity that takes time to develop and to become part of an educator's practice" (ibid.: 167).

In education, we use reflective sketchbooks to monitor the development of critical reflection on a level of metalearning, or reflections on a "metacognitive level" (Briñol and DeMarree 2012). Acquisition of metalearning ability, which is considered necessary under the concept of transliteracy (see chapter 2 for metaliteracy, Sukovic 2016: 5), presupposes the use of various artistic languages to foster "'conversation with the situation,' and develop understanding" (de Beer 2018; Moate et al. 2019: 169).



Figure 7. Example of a process of working on reflective sketchbooks in the framework of 'Beyond Text Project'

Considering the role of artistic literacy in meaning-making in a media environment, using reflective sketchbooks requires the integration of digital media. The 'Beyond Text Project also addresses the use of digital media in reflective sketchbooks.' Figures 8.1 and 8.2 provide examples of a reflective sketchbook created using various digital media forms during the 'Beyond Text' course.



Figures 8.1 and 8.2. Examples of a reflective sketchbook made using digital media

The acquisition of artistic literacy, and its evaluation, should not be limited to using these forms of assessment. Developing further research concerning evaluation and reflection in acquiring artistic literacy could provide an understanding of the role of these forms of assessment in developing artistic literacy.

5. Conclusions

In our research we have identified artistic literacy as a coherent synthesis of contemporary educational competences and skills. More specifically, we have framed and analyzed the notion of artistic literacy as a part of transliteracy and meaning-making of digital media used in a learning environment. The analysis of the Vygotskian perspective on the role of artistic work in education, and its relation to developing psychological functions and sign operation in learning, allows the understanding of the acquisition of artistic literacy as a psychological tool in learning. Offering intersemiotic translation practice in the analysis of meaning-making of diverse artistic languages in learning allowed the establishment of a methodological framework for acquiring a competence of artistic perception and developing artistic literacy for meaning-making in learning. Adopting the concept of dialogic space allowed the research to analyze the role of developing metaknowledge in the process of evaluating the acquisition of artistic literacy in education. Further research may explain how the development of artistic literacy in-

fluences the development of sign operation in learning, considering the varied abilities of meaning-making in learning. Further research may also shed light on maintaining a more coherent acquisition of artistic literacy in relation to contemporary education.

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