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An Interdisciplinary Approach for Understanding Artworks: The Role of Music in Visual Arts Education

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Abstract

In a world that is becoming increasingly more visual, there is a greater need to educate children to better understand images. A school subject that deals directly with image understanding is visual arts. This article discusses an interdisciplinary approach to promote art understanding, within a multimodal environment that combines art and music. The approach was tested with pre-service elementary school teachers (experimental and control group). The target group is of special interest because, in many countries, generalist-teachers and not art-specialists teach art in elementary schools. The findings indicated that when art viewing was accompanied by musical stimulus (experimental group), viewers/listeners were able to exhibit a variety of art-appreciation skills and to move to elaborated responses to the artworks. The findings have implications for teacher-training courses as they suggest ways of enhancing future

teachers' art-appreciation skills and set a framework for developing multimodal educational material for art viewing activities.

Introduction

Contemporary society and contemporary forms of communication are driven by technological, social, economic and political changes and thus function in a multimodal environment. Education is trying to embrace current changes and respond to new challenges for promoting multiliteracy and multimodality. This is especially true for arts education as art-forms/artworks are forms of communication (Duncum, 2004; Pascoe, 2007). In fact, in a world that is increasingly more visual, there is a greater need to educate children to understand and respond to the visual images around them. Thus many art curricula, in different countries, stress the central role of artviewing¹ activities along with artmaking activities. At the same time, a gap is reported between the visual arts curriculum (policy) and teaching practice, which identifies that art lessons primarily focus on 'doing' art rather on understanding art (Epstein & Trimis, 2002). This is because the implementation of the curriculum lies on teachers and it is largely framed by their knowledge and attitudes towards the role of visual arts in the school curriculum (Bain, Newton, Kuster & Milbrandt, 2010; Oreck, 2004). In countries where generalist teachers teach art (and not art specialists), several concerns have been raised in relation to teachers' lack of confidence on their own art knowledge (Garvis & Pendergast, 2011), including their abilities to understand art and teach art using artworks. Having in mind these concerns, this paper concentrates on teacher training courses and in particular on enhancing pre-service teachers' understanding of artworks using an interdisciplinary approach.

An interdisciplinary approach is chosen for several reasons:

- a) There is a growing body of research stressing that information in multimodal messages can more effectively be perceived and understood than information in messages that use one mode of representation (Eteokleous, Pavlou & Tsolakides, 2011).
- b) Pre-service teachers are not art majors and it is acknowledged that they frequently come to elementary teacher training courses with little to no art background, do not feel confident in understanding the visual mode of representation and might be resistant to contemporary art ideas (Buffington & Kushins, 2007; Stewart & Walker, 2005). Thus, they are frequently considered as inexperienced art viewers. It is assumed

¹ Artviewing activities with children involve looking at artworks, observing carefully, thinking and talking about, questioning, deriving meaning, interpreting and discussing.

that the use of other modes of communication/representation may contribute to the development of their art appreciation skills.

c) In the country that the study took place (Cyprus) the new educational reform of the Cypriot school curriculum focuses greatly on the need for interdisciplinarity.

The main aim of the study was to investigate whether art viewing accompanied by music could encourage the development of art appreciation skills and thus promote art understanding. The main hypothesis under investigation is that multimodal activities for art understanding will be more effective than art viewing activities that are based only on the visual mode of communication, especially when viewers have limited experiences with artworks. A secondary aim was to provide guidelines for the development of multimodal educational material for children.

First, the theoretical framework of the study is presented starting with the issue of interdisciplinarity and how it relates with the context of the study. Then the two modes of communication/representation, the visual and the acoustic, are separately discussed in terms of the aesthetic responses that they may provoke and how these responses may be classified (with emphasis on the aesthetic responses to artworks). Afterwards a detailed description of the methodology of the study is given. Last, the paper moves to the presentation of the findings and it is concluded with a discussion of the main findings.

Interdisciplinary Approaches – Interaction of Visual Arts and Music

Interdisciplinary approaches in teaching have become popular during the last decades. The design of the new Cypriot curriculum in 2010 for elementary and secondary education promotes a more holistic approach in education that connects / interrelates different subjects, disciplines and areas of knowledge. However, it is significant to notice that not all subjects can be interrelated. Chrysostomou (2004) explains that interdisciplinary approaches in content and method should be adopted only when the connections between disciplines are strong and apparent.

The discipline of music seems to be frequently trivialized or even distorted when teachers try to make it part of an interdisciplinary approach. Many teachers seem to use music as a background to non-musical activities or even they use musical activities, such as singing, during other than music lessons, basically to make their teaching more enjoyable. Although learning a song about colours could form an interesting methodological approach for the art teacher, it does not constitute an interdisciplinary curriculum (Chrysostomou, 2004). But music can be successfully integrated with other forms of art (i.e. visual arts, dancing) when their elements are synesthetically linked. For example, it has been noted that visual pieces of art and music can be connected by common structural elements (Valk-Falk, Lock & Rosin,

2005, Voto, 2005); elements present in most musical compositions (i.e. form, style, timbre / colour, flow, contrasts of tension and release, and mood) are also found to visual artworks (Glenda, 2006). In particular, the patterns of tones (rhythm) can be linked to visual patterns, the sounds of voices / instruments (colour) are connected to hue / pigment used in visual artworks, the shape of the melody is linked to visual shapes, and the blending of sounds (harmony) is connected to visual art works' blending of colours (Bohannon & McDowell, 2010). Hence, music can be listened while observing an artwork that is similar by the character, as music can also "tell a story" that is presented by a piece of art (Filipovic & Grujic-Garic, 2011, p. 239).

Since most learners (children and adults) learn through both auditory and visual senses, an approach that includes music and visual arts may foster deeper understanding of both forms of art. Therefore, being able to focus on elements of a music piece can facilitate their ability to distinguish auditory information and sort it into foreground sound for purposes of learning and concentration. Similarly, being able to focus on individual elements is a vital component of visual literacy or even to evaluate and perceive with accuracy and understanding, visual stimuli (Glenda, 2006).

Artworks and Aesthetic Responses

In this section the way viewers may respond to visual images/ artworks is discussed. Aesthetic responses are aesthetic judgments about art works, arrived at by people on the basis of a number of factors. Important factors that influence aesthetic responses relate to viewers' experiences with artworks, including specialized knowledge about art.

Parson (1987) has described five levels of aesthetic development, from naïve viewers (with limited to no experiences with artworks) to sophisticated viewers (with extensive knowledge in art through their studies) named as: a) favourism, b) beauty and realism, c) expression, d) style and form and c) autonomy.

Parson's theory has been frequently characterised as a developmental theory and to overcome its limitations researchers have adapted it (Erickson & Clover, 2003; Erickson & Villeneuve 2009; Ishizaki & Wang, 2010). More specifically, his theory was adapted in order to reflect viewpoints/repertoires of art understanding that are not evolving from one stage to the other but are additional viewpoints/repertoires to the earlier ones, which also include variations of each one. For example, Ishizaki and Wang (2010) base their work on Parson's (1987) descriptions of the topics that catch viewers' attention when responding to an artwork and on the interplay of these topics. In particular, Parson (1987) describes four topics: a) subject matter, b) expression, c) medium-form-style and d) judgment, that, as Ishizaki and Wang (2010) point out, reflect two aspects of viewers' responses: features of artworks (subject

matter, expression, and medium-form-style) and response behaviours of the viewers (judgment). These two aspects interact with each other and exhibit a number of different appreciation skills. Ishizaki and Wang (2010) recorded the interaction of these two aspects when analysing viewers' responses to artworks in an effort to better understand viewers' acquisition of art appreciation skills. Following their recommendations, these two aspects are adopted and thus two primary factors are used to identify viewers' aesthetic responses to artworks (see table 1 for the depiction of their interaction):

- a) The features of artworks that viewers may pay attention to and in particular subject matter, expressiveness, elements of art, and style, and
- b) The response behaviours of the viewers, which include observation, association / impression, analysis, interpretation, and judgment. Here more behaviour responses are identified (not just judgment responses), which are based on the works of Feldman (1994) and Housen (1983). Further, the interpretation response is divided into two sub-categories due to the particularities of this study: a) interpretation of feelings/emotions, and b) interpretation of ideas/meanings. Elaborated in the following section, music stimulus may frequently be associated with the arousal of feelings/emotions. Thus it was deemed important to separately record any interpretations that took place related to feelings.

Table 1

Taxonomies of aesthetic responses to artworks

		Elements of artwork			
		Subject matter	Expressive ness	eLements of art	Style
	Observation	SO	EO	LO	TO
	Association/Impression	SA/I	EA/I	LA/I	TA/I
Response	Analysis	SA	EA	LA	TA
behaviors	Interpretation a) Ideas	SIa	EIa	LIa	TIa
	Interpretation b) Feelings	SIb	EIb	LIb	TIb
	Judgment	SJ	EJ	LJ	TJ

Music and musical/aesthetic responses

The special kind of experience called the ‘aesthetic’ involves all the arts, including music, which may be pushed together into one category (Swanwick, 1999). One of the characteristics of this aesthetic category, which is distinguished from other areas of human activities, is that the arts require “not a critical response but an aesthetic response – a response through feeling, the senses and imagination” (Abbs, 1994, p. 92).

Literature shows that music feeds and steers imagination. Music is an auditory image (Russel, 1998) and can be considered as mood-inducing (Kreutz, Ott, Teichmann & Vaitl, 2008; Lundqvist, Carlsson & Hilmersson, 2009; Sloboda, 2005; Weinberger, 1996). However, it is important to note that there is a distinctive difference between the results of research done in this area. Some studies have shown that individuals may respond to same musical stimuli differently, while some others prove that emotions evoked in the listeners are the same as those expressed by the music itself.

One perspective, according to Kreutz et al. (2008), suggests that individuals may experience same music differently. Identical musical stimuli may induce widely diverging emotions, such as happiness, sadness, peace, anger or even neutral. Individuals may give different interpretations to music, and respond to it in a unique way, just like when responding to artworks. Different reactions of individuals are due to differences among individual preferences and expectations, as well as the extent of each person’s familiarity with a particular styles and individual pieces of music (Kreutz et al., 2008). In other words, responses to music depend on individuals’ personal taste of music. During the last few decades it has become customary to regard music education as a form of aesthetic education. Elliot (1995) has argued that in order to listen to music aesthetically, one needs to focus on music’s elements and structural properties. This may suggest that one should be specially trained in order to be able to respond to music aesthetically. According to Glenda (2006), learning how to focus on elements of a music piece can facilitate one’s ability to distinguish auditory information for purposes of concentration. However, Regelski (2005, p. 233) argues that music is not only for the experts, but also for “down-to-earth people” and everyday life. For the purposes of this paper, and as this research involves students who are not ‘experts’ in music and have not received special aural training, aesthetic responses to music are considered to be responses through feelings and emotions.

A second perspective demonstrates that emotions evoked in listeners, when they listened to simple happy or sad songs, were the same as those expressed by the music itself. Therefore, the emotional reactions to the music are somehow evoked by the emotional expression of the music (Lundqvist et al., 2009). According to various researchers, who isolated musical factors that elicited particular responses, the range of human reaction to music is mainly due to the

elements of music itself. Such elements would be tempo (Furnham & Allass, 1999), tonality (Webster & Weir, 2005), intensity (Pelletier, 2004), texture (Gabrielsson & Lindstrom as cited in Webster & Weir, 2005), form (Pelletier, 2004) and melodic line (Gerken as cited in Webster & Weir, 2005). This suggests that music of particular constituents, and therefore of a particular mood, arouses similar feelings in listeners. Hence, a selection of particular pieces of music may help the viewers / listeners to anchor and embody the meaning and feelings of a painting more easily, if the intentions of the composer match the intentions of the painter.

Methodology

Sample

The sample of the study comprised 59 first year students studying to become elementary school teachers in Cyprus. The sample included 18 men and 41 women, aged 18 to 21 years old. Thirty students were in the experimental group and 29 in the control group.

Research instruments

Two methods were used to gather the data of the study: written, unprompted art responses and semi-structure group interviews. Participants were initially asked to look carefully at reproductions of four selected artworks and write down their personal responses. There were no specific instructions about each artwork, but general instructions for all artworks; the participants were asked to try to describe the artworks and interpret them, or to express their views and judgments or to simply write whatever they wanted and/or whatever came to their mind when looking at them. The experimental group responded to the artworks while listening to four different music pieces; one for each artwork, while the control group were shown the artworks without any music. Following the art viewing, four semi-structure group interviews were conducted that included eight participants from the experimental group and eight participants from the control group. During the interviews the participants were asked to comment on: a) past and present experiences with viewing artworks, and b) the activity that they participated for the purposes of this study. Additionally, participants in the experimental group were asked about their past and present experiences with listening to music.

Procedure

The first step of the study was to select the artworks. The choice was made according to the criteria for selecting artworks for a meaningful viewing experience as proposed by Yenawine (2003). In particular, the criteria of accessibility, expressive content, narrative, and diversity, which are very important for beginning viewers, were taken into consideration. Four modern paintings were chosen based on their theme and style as it was considered that the participants of the study were naïve viewers with little or no experience to contemporary art ideas. Two

paintings had a narrative representation with realistic elements and two paintings were more abstract. Four music pieces were chosen, one for each painting, according to the mood and meaning that each visual artist intended to express through his/her artwork. That is, the mood and/or meaning of the artwork corresponded with the general mood and feelings intended to be expressed by the composer, as well as with the musical elements of the music pieces (orchestration, melodic line, intensity, form). The paintings and the music pieces that were chosen were:

1. *The two Fridas* by Frida Kahlo (1939), accompanied by *Girea (Pain's theme song)* from the soundtrack of *Naruto Shippuden* (animation series).
2. *The kiss* by Gustav Klimt (1907-1908), accompanied by the *Song without words, Op. 109* by Erich Mendelssohn.
3. *Tableau II*, by Piet Mondrian (1921-1925), accompanied by *Big noise from Winnetka* by Bob Haggart.
4. *Yellow, Red, Blue* by Wassily Kandinsky (1925), accompanied by *La campanella*, by Franz Liszt.

Data Analysis

Data analysis included content analysis of the participants' written responses to the artworks. Classification of written responses was determined based on a framework that included the range of aesthetic responses to artworks. For example, a participant's response could be classified in one or many taxonomies of table 1, according to what exactly s/he wrote down. Interview data was analyzed using the constant comparative method of interview analysis (Silverman, 2010).

Findings

The findings are presented into two sections: a. written responses and b. interview data.

Written Responses

In this section the participants' responses to each artwork are presented separately using the taxonomies presented in table 1. The participants' responses to the two artworks that have realistic representations proceed (tables 2 and 3) and their responses to the two abstract artworks follow (tables 4 and 5). Each table contains both groups' responses to the artworks (c= control group, e= experimental). Instead of frequencies, percentages (within groups) are given to allow for comparisons to be made. Moreover, the last column of each table contains the total percentage of the participants who made a comment based on the different behavioural responses that were exhibited.

In general, as shown in tables 2 and 3, the participants' comments for the two artworks, that have realistic representations, focused on the subject matter of the artwork. All the participants commented on the subject matter either by simply observing what was there or by making other comments, such as interpretive or judgemental (see column, *subject matter* and specifically the SO, SA/I, SA, SIa, SIb, and SJ taxonomies in tables 2 and 3). Many participants also commented on the expressiveness of the artwork (see column, *expressiveness* and specifically the EIa, EIb, and EJ taxonomies) and/or on the elements of art of the artwork (see column "eElements of art" and specifically the LO, LA, LIa, LIb and LJ taxonomies). It is important to note that, for both artworks, 90% of the participants of the experimental group made interpretive comments, which related to feelings and emotions (see the SIb, EIb, and LIb taxonomies).

Table 2

Aesthetic responses to Frida Kahlo's painting 'The two Fridas'

	Elements of artwork								Total % of	
	Subject matter		Expressiveness		eElements of art		Style		participants	
	c*	e**	c	e	c	e	c	e	c	e
Observation	17.2***	40.0	-	-	3.4	-	-	-	20.6	40.0
Association/ Impression	31.0	30.0	-	-	-	-	-	-	31.0	30.0
Analysis	27.6	10.0	-	-	6.9	3.3	-	-	34.5	13.3
Response behaviors	27.6	20.0	6.9	3.3	-	3.3	-	-	31.0	26.6
a) Ideas	24.1	70.0	13.8	23.3	10.3	6.6	-	-	34.5	90.0
b) Feelings	6.9	-	10.3	-	6.9	3.3	-	-	24.1	3.3
Judgment	6.9	-	10.3	-	6.9	3.3	-	-	24.1	3.3

* c = control group, ** e = experimental group, *** all numbers indicate percentages within groups

Table 3

Aesthetic responses to Gustav Klimt's artwork 'The kiss'

	Elements of artwork								Total % of	
	Subject matter		Expressiveness		eLements of art		Style		participants	
	c*	e**	c	e	c	e	c	E	c	e
Observation	44.8***	43.3	-	-	17.2	3.3	-	10.0	48.2	53.3
Association/ Impression	27.6	23.3	-	-	-	-	-	-	27.6	23.3
Analysis	17.2	-	-	-	13.8	16.6	-	-	24.0	16.6
Response behaviors	Interpretation	13.8	3.3	-	3.3	-	-	-	13.8	6.6
a) Ideas	Interpretation	37.9	60.0	10.3	30.0	3.4	13.3	-	48.2	90.0
b) Feelings	Judgment	-	3.3	10.3	3.3	10.3	6.6	-	20.6	13.2

* c = control group, ** e = experimental group, *** all numbers indicate percentages within groups

Apart from the similarities regarding the way that each group responded to the two artworks with realistic representations, some differences existed. Thus, some responses to the two artworks are separately discussed. Starting with Kahlo's artwork (table 2), it should be noted that none of the participants commented on the style of the artwork. Style is associated with knowledge and experience and thus this finding was expected. Important differences between the two groups were noted for the observational comments on the subject matter of the artwork (SO taxonomy: c=17.2% and e=40%) and for the interpretational comments (regarding feelings) on the subject matter of the artwork (SIa taxonomy: c=24.1%, and e=70%). Only one participant in the experimental group made a judgmental comment, while

¼ of participants in the control group made judgmental comments. Comments made by those in the control group were mostly non-reflective. Participants, in the control group, who made evaluative comments did not offer any other comments nor did they try to rationalize their judgment.

For the artwork created by Klimt (table 3), only 10.0% of the participants made comments about style, which was an expected finding. Also, substantial differences were noted between the control and the experimental group regarding their interpretive comments related to feelings (c= 48.2% and e= 90.0%). Moreover, participants from the experimental group, who offered judgemental comments, also offered comments that were categorised in other taxonomies (i.e. SO, SA/I, SIb, EIb, LA, Lib). This was regarded as evidence of reflection as it demonstrated participants' attempts at validating their evaluation.

More observational comments were made for the two abstract artworks (tables 4 and 5) than for the two narrative artworks (tables 2 and 3) by both groups. In general, it can be noted that for the artworks created by Mondrian and Kandinsky (tables 4 and 5, respectively), participants' comments focused on the elements of art (see column 'Elements of art' by simply observing what was there or by making other comments related to all other taxonomies (LA/I, LA, LIa, LIb, LJ). The control group offered more comments related to the association/impression category than the experimental group, while the experimental group offered more interpretive comments than the control group, especially in terms of feelings and emotions. Moreover, the control group made more judgemental comments than the experimental group. However, most of control group's judgmental comments were non-reflective, while judgemental comments made by the experimental group were reflective (in terms of offering justification for their judgment by commenting on the elements of the artwork).

Additionally, important differences were noted on the subject matter. Many participants commented on subject matter (see SA/I, SIa, SIb, and SJ taxonomies) for Mondrian's artwork (table 3), while none of them offered any comments related to subject matter for Kandinsky's artwork (table 4). However, this difference is largely attributed to the way in which the comments were categorised. Since Mondrian's artwork was much simpler than Kandinsky's, many participants made comments regarding the artwork as a whole. For example, one participant noted, "This painting looks like bathroom tiles" (SA/I taxonomy). Another noted, "It looks like a dance floor where people used to dance in the old days" (SA/I, SIa taxonomies). In such cases, the comments were regarded as comments related to subject matter. Participants described the content of the more detailed work, by Kandinsky, in terms of colours, lines, and shapes. And when they attempted to ascribe meaning to it they frequently referred to the aforementioned elements. For example, a participant noted, "In this

painting there is a variation of shapes and colours, which give me the impression of objects found in our environment” (LA/I taxonomy). Such comments were put under the ‘eLements of art’ category.

Table 4

Aesthetic responses to Piet Mondrian’s artwork ‘Tableau II’

	Elements of artwork								Total % of	
	Subject matter		Expressiv.		eLements of art		Style		participants	
	c*	e**	c	e	c	e	c	E	c	e
Observation	-	-	-	-	55.2***	60.0	6.9	-	65.5	60.0
Association/	31.0	20.0	-	-	6.9	3.3	-	-	37.9	23.3
Impression										
Analysis	-	-	-	-	17.2	20.0	-	-	17.2	20.0
Response										
Interpretation	13.8	10.0	-	3.3	3.4	3.3	-	-	17.2	13.3
behaviours										
a) Ideas										
Interpretation	6.9	20.0	10.3	16.6	13.8	36.6	-	-	31.0	73.2
b) Feelings										
Judgment	3.4	6.6	17.2	-	10.3	10.0	-	-	30.9	16.6

* c = control group, ** e = experimental group, *** all numbers indicate percentages within groups

Table 5

Aesthetic responses to Wassily Kandinsky’s artwork ‘Yellow, Red, Blue’

	Elements of artwork							
--	---------------------	--	--	--	--	--	--	--

	Subject matter		Expressiv.		eLements of art		Style		Total % of participants	
	c*	e**	c	e	c	e	c	E	c	e
Observation	-	-	-	-	51.7***	40.0	27.6	33.3	65.5	40.0
Association/ Impression	-	-	-	-	31.0	26.6	-	-	31.0	26.6
Analysis	-	-	-	-	24.1	6.6	-	-	24.1	6.6
Response	-	-	10.3	16.6	27.5	33.3	-	-	27.5	33.3
behaviors a) Ideas	-	-	-	26.6	10.3	63.2	-	-	10.3	63.2
b) Feelings	-	-	6.9	-	41.4	13.3	-	-	41.4	13.3
Judgment	-	-	6.9	-	41.4	13.3	-	-	41.4	13.3

* c = control group, ** e = experimental group, *** all numbers indicate percentages within groups

What was not classified in the taxonomies mentioned above were the participants' comments in relation to the music listened. However, it should be noticed that most of the participants of the experimental group referred to the music, in their written responses (i.e. 'high intensity in music', 'music is happy and lively', 'the sound is unusual and strange'), and all participants of the experimental group linked music with feelings and meanings of the artworks, thus the higher number of interpretative comments. For example: 'Music has a happy rhythm and it looks like a game of little children' (Mondrian's artwork, see also figure 1 and listen to the music piece).

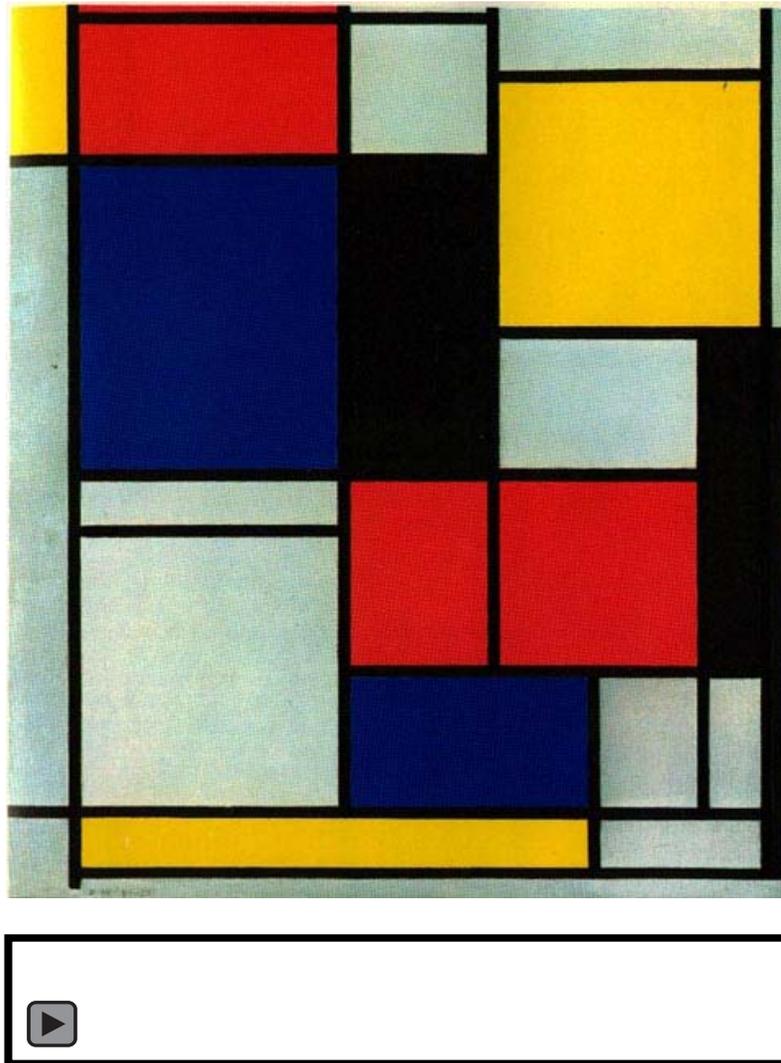


Figure 1. 'Tableau II' by Piet Mondrian (1921-1925), accompanied by the 'Big noise from Winnetka' by Bob Haggart

Other examples of the experimental group's written responses that referred to the music selections are included in table 6.

Table 6

Examples of written responses that illustrate the role of music in interpreting artworks

Artwork	Music Accompaniment	Written response
<i>Tableau II</i> , by Mondrian (1921-1925)	<i>Big noise from Winnetka</i> by Bob Haggart	This painting demonstrates a dance. It is a dance floor where people dance with quite old music.
<i>The kiss</i> by Klimt (1907-1908)	<i>Song without words, Op. 109</i> by Erich Mendelssohn	This music is calm and refers to a sweet moment of a couple. But then music becomes more tensed. Probably something happened. The sounds of the piano and the violin demonstrate a woman's feelings when she is in the arms of her beloved.
<i>The two Fridas</i> by Kahlo (1939)	<i>Girea (Pain's theme song)</i> from the soundtrack of <i>Naruto Shippuden</i> (animation series)	Music is so dramatic. It makes me think of death. This painting provokes me so much pain and sadness. The music recalls something dark and when combined with various elements of the painting it makes you scared.
<i>Yellow, Red, Blue</i> by Kandinsky (1925)	<i>La campanella</i> , by Franz Liszt.	Music makes the painting to look even happier and more mysterious at the same time. Music is confusing and strange, just like the painting itself.

Interview Data

While four group interviews took place (two with participants of the control group and two with participants of the experimental group), this section focuses on participant responses of the experimental group. This is because the interviews with the control group were rather short, with few remarks, while interviews with the experimental group were long and included many issues in relation to the importance of music for art-understanding. In general, the control group noted that writing responses to artworks was an interesting activity. Participants noted that the writing activity was not something they had done before and that they found it somewhat difficult to write something about the two abstract artworks.

Interview data showed that participants' past experiences, with viewing artworks, were limited or even non-existent, both for original and reproduction artworks. In addition, they did not have any preferences related to specific forms of artworks, as they had no preconceived ideas of "good" art (for example realistic vs. abstract). Participants (experimental group) did, however, have particular preferences to specific types and styles of music and reported that they listened to music, daily. Music preferences were mainly based on personal criteria, time of day, mood and reasons for listening to music (for example while studying, out for a party etc). Therefore, our interviewees' experiences with listening to music were far more encouraging than their experiences with artviewing.

The experimental group offered many comments in relation to responding to artworks while listening to music selections. In particular, their spontaneous comments, about the music, confirmed the written data regarding the important role of music during their encounters with the artworks. Some examples of such comments are:

"The music affects *the way* you comment on an artwork".

"It helps you to describe a picture".

"It can help you to wonder".

"The music helps you to guess what is going on".

"It is one more lead. So the music affects you. It helps".

In general, participants noted that musical selections contributed significantly to their ability to interpret the realistic artworks. Furthermore, they noted that it played a vital role during the interpretations of the abstract artworks. For example, one participant noted that, "Without it (the music) we wouldn't end up with this interpretation! We would lose interest".

They also talked specifically about the benefits gained by the presence of music, such as being able to concentrate, to embody the artworks and to offer in-depth interpretations. Two examples where the music piece enabled them to focus for a longer period of time on the artwork and try to interpret it follow. The first relates with Klimnt's artwork (see figure 2 and listen to the music piece). Two participants noted:

"At the beginning the music is slow, soft, calm, there is love, you see the couple together. They are in love. There is companionship. But then the music slowly-slowly changes. It brings intensity, power, and this changes things..."

"Yes! And you think that in a relationship not always things are great, smooth..."



Figure 2. 'The kiss' by Gustav Klimt (1907-1908), accompanied by the 'Song without words, Op. 109' by Mendelssohn

A second example refers to Kandinsky's artwork (see figure 3 and listen to the music piece). One participant said:

"It's better with the music because with the music you want to see. Even that picture (*Kandinsky's work*) that I didn't like, I watched it because there was music. Otherwise it would be indifferent to me and I wouldn't be able to say something about it".



Figure 3. ‘Yellow, Red, Blue’ by Wassily Kandinsky (1925), accompanied by ‘La campanella’ by Liszt

Moreover, it seemed that the music reinforced embodiment of the artworks. For example:

“We felt it (the artwork) better because of the music”.

“The music makes everything more intense. The combination of sound and image helps you to say more things, more emotions”.

“I was able to get into the shoes of the painter and feel his/her emotions”.

“It’s nicer to view artworks with music because you let go ... and you fill with emotions”.

Interview data also underlined that the music helped the viewers/listeners to anchor the meaning of the artworks and promoted in-depth interpretations. For example (see figure 4 and listen to music):

“What we listen and see now are emotions of conflict. Some people are involved in a battle, mental or physical and the outcome is uncertain. That there is no guaranteed winner... It provokes me melancholia... sadness... zenith... that something is coming... something is going to happen...”

“When you see an artwork you are basically making up a story. And the music helps you to make up this story”.



Figure 4. ‘The two Fridas’ by Frida Kahlo (1939), accompanied by ‘The pain theme’ from the soundtrack of Naruto Shippuden (animation series)

The experimental group also commented on the conditions that need to be met in order for the music to be helpful. They tended to compare the artworks with the music, noting similarities in the messages communicated. They also talked about how important it was to have a good

match between the artwork and the music piece, and that not all music pieces might be helpful with the understanding of an artwork.

Discussion

The participants of this study had limited encounters with artworks and were inexperienced viewers. As expected they were not able to make elaborate comments on the style and form of the artworks nor were they able to recognize that artworks are socially constructed and contextual, nor they were able to make informed judgments about the concepts and values with which a tradition constructs the meaning of artworks (Parson, 1987). However, they were able to exhibit a variety of art appreciation skills that were captured by the taxonomies adopted in this study. Further, the process adopted for classifying their written responses allowed for comparisons to be made among the control and the experimental group and highlighted the ability of the experimental group to derive meaning out of the artworks and to offer interpretive comments, something that is considered an important aspect of the artviewing process. As Barrett (2000) wrote, “a work of art is an expressive object made by a person, and therefore unlike a tree, a rock, or other mere things, it is always about something; thus, unlike trees or rocks, artworks call for interpretations” (p.7).

The experimental group’s interpretations focused largely on the feelings/emotions evoked by the artworks, something that was attributed to the music pieces that accompanied the artworks. Thus, there were pieces of evidence that confirmed the hypothesis of the study. The music enabled the participants to focus on the artworks for a longer period of time, to embody the artworks and to offer meaningful interpretations, especially on a narrative level. This finding supports and builds on previous research (Filipovic & Grujic-Garic, 2011) that has shown that music stimulus can influence young children’s creative production on a narrative level. Further, the experimental group did not pay attention to the critique / judgment process as did the control group; they focused on trying to understand the artwork (interpreting process) rather than judging it. For example, a rather frequent response by the control group for the abstract artworks was related to the dislike of them, e.g. “I don’t like this painting”. The fact that the experimental group did not focus on judging the artwork was a positive result as the process of understanding art should not focus on judging an artwork but on deriving meaning out of it (Barrett, 2000). Moreover, in cases where the experimental group offered judgmental comments, these were reflective, unlike the control group. The experimental group’s interpretations also appeared to be reflective as there was evidence of several art appreciation skills/capacities. Participants who offered interpretive comments also offered other comments, such as observational and analytic (response behavior categories). This finding suggests that the music appeared to enable the accumulation of participants’ art appreciation skills. Response behavior appeared to accumulate from observational response,

to analytic response, to interpretive response (Erickson & Clover, 2003; Ishizaki, & Wang, 2010).

The artviewing framework adopted for the experimental group indicated that the multimodal framework for understanding artworks can promote inexperienced viewers' art appreciation skills and enhance their art understanding from non-reflective viewers to more reflective viewers with expressed interest on artworks as a form of communication and expression of ideas, messages and feelings. This is important for pre-service elementary school teachers, especially in countries where generalist teachers, rather than art specialists, teach visual arts education. The ability to focus, observe closely, imagine and to offer cognitive and emotional responses are important in constructing the meaning of artworks (Ishizaki & Wang, 2010). This framework can be adopted with student teachers to help them develop their pedagogical content knowledge and to help develop art appreciation skills.

The construction of supportive educational material within this framework will also support generalist teachers' efforts to implement the dual aspect (viewing and making art) of visual arts curriculum, as well as children's ability to communicate and understand ideas in a multimodal environment. In this study the music pieces helped first year students understand artworks and strengthened the information communicated, in the artworks, by communicating similar messages and/or feelings in another mode (the acoustic mode). Thus the educational material needs to include artworks and suggestions of appropriate music pieces for them.

Overall this study suggests that multimodal messages can be more effective when certain conditions are met. Further research will be required in order to understand how learners' aesthetic responses may develop when multimodal messages are communicated. A limitation of this study is that taxonomies of aesthetic responses to artworks were adopted and adapted by a study that included only visual messages and not multimodal ones. However, for the particularities of this study this was necessary as the control group tried to understand messages that were communicated only in the visual mode.

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