

ANALYSIS OF SOUNDPAINTING SIGN LANGUAGE VISUALS

Skatkrāsošanas zīmju vizuālā valodas analīze

Mahirs Jarlikaja (Mahir Yerlikaya)

Ondokuzas Majis Universitāte / Ondokuz Mayıs University

e-mail: mahir.yerlikaya@omu.edu.tr

Sonats Kaskuners (Sonat Coşkuner)

Ondokuzas Majis Universitāte / Ondokuz Mayıs University

e-mail: coskunersonat@gmail.com

Abstract. *Soundpainting constructed by composer Walter Thompson is a simultaneous universal composition sign language which is made for musicians, dancers, poets and visual artists operated in improvisational environment. Today soundpainting language contains more than 1500 signs. In this research it is aimed to analyze (converting visual texts to writing texts) the gestures (moving visuals) in 1st level of soundpainting. Content analysis was made in this study. After the data analysis, it was discovered that soundpainting sign language gestures have common features in real life body language. Also it was seen that these gestures have universal communication language which has no boundaries like language or hearing deprivation.*

Keywords: *Soundpainting, Visual Language, Semiotics, Visual Literacy, Analyze (Bence Content Analysis Yazınız. saygılar).*

Introduction

Nowadays, the time is very important, life circumstances are getting harder and harder and changing, communication comes into prominence day by day. Communication can be described as an emotion, idea, behavior and/or knowledge exchange which is happening between two or more people who are called sender and receiver (Becer, 2002: 11). Communication can be passive (for example the thing we do with TV) or it can be active. It is seen that nominative responses, emotions or experiences of constructs are affective to turn transmission into communication. Communication does not always show a feature from one subject to another. It has wide range from face-to-face to mass communication, from one-sided communication to multiple-sided communication or multiple characterized communication etc. (Aslan, 2012: 21). Today, every new technology developed by human being is giving cause for a new communication tool (Messaris & Humphreys, 2006: 15). It can be said that humans' harmony with new communicational channels developing constantly are must-haves of communication.

People understand each other and they are being able to communicate accurately with transferring properly what they want to transfer orally and visually. A person using oral and written expressions commonly is using the sign language which is a universal language as a (visual) language which gathers people on a common point. Visual language is more effective communication tool because you can transfer knowledge in less time to more people compared to oral and written language. According to Avgerinou and Ericson (1997: 285, 287) visual language has its own vocabulary grammar and syntax. One who is visual literate can use writing and reading visual language, can decode a visual message successfully and can create a visual message.

The language concept is used for a communication tool which society uses to transfer ideas and emotions directly or indirectly. Requirement for understanding and transferring features in life feeds and grows the language and even makes it a common language. From this point of view, it must be said that language is a social phenomenon and compulsory it has to be systematic to communicate. Language is not just formed by audio and text. Visuals are the best

example to give for that. We know that visual constructions have their own language. One of the newest creation of them is Soundpainting sign language. Soundpainting sign language is made for musicians, dancers, poets and visual artists operated in improvisational environment. Soundpainting sign language is a universal language that everybody can do and understand. The people who wants to do Soundpainting creates a group and opposite side of this group “Soundpainter” comes which is the composer/conductor and Soundpainter performs with this group. Communication in language of Soundpainting is possible for the people who want to talk this language by knowing the meaning of the syntaxes and gestures that are formed this language. Gestures in this language that was created by Walter Thompson (American composer) are moving visuals, which were designed for every performer to read and write exactly the same language.

Soundpainting

Soundpainting is the multidisciplinary live composing sign language for musicians, dancers, actors and visual artists created by Walter Thompson in Woodstock, New York 1974. Presently (2015) the language comprises more than 1500 gestures that are signed by the soundpainter to indicate the type of material desired of the performers. The creation of the composition is realized through the parameters of each set of signed gestures (Thompson, 2006: 2).

Soundpainting syntax is divided into 6 categories; these are identifiers, content, modifiers, go gestures, modes and palettes. These are the movements showing who will do what and when. Besides these, there are certain movements and previously prepared palettes (Thompson, 2006: 2).

Generally, soundpainter (composer) who is standing in front of the group, points out the random or/and specific materials which is going to be performed by the group by using his/her hand and body movements. Soundpainter develops performer's responses, shapes according to the composition after that defines another series of sign and phrase and continues the process to compose. According to Coşkuner, soundpainting is one of the rare training and study area which performers can be free and they can do improvisation. No matter which level is performers are, they do improvisation up to their knowledge and skills and thanks to this language they have an opportunity to develop improvisation skills. Soundpainting language is a creation area not only for performers but also important for composer. When the soundpainter stands across the group, occurring both voices and visual materials by his movements that s/he pointed out are her/his own composed creation. Composition of soundpainting is formed and developed in parallel soundpainters' knowledge and creativity (Coşkuner, 2016: 16).

Communication in Soundpainting Language

Basic concept for soundpainting language is communication. The need for effective communication is basic skills to express, explain and understand herself/himself, avoid or lead the conflicts and solve the problems that occurred but shortly it is the basic skills to reach an agreement with herself/himself or the society for Lahninger (1999) (derived from Uzuntaş, 2013: 12).

Soundpainting is a sign language. You give sign to the community and they respond in sound. You determine the next instruction based on the response. This is a dialogue between you and the community (Thompson, 2006: 1). Thompson was expressed the communication in soundpainting language. More than 1500 gestures based in soundpainting meanings varies according to different disciplines. For example, soundpainter points to the group “Long Tone”, music performer makes a single sound continues at length. If it is pointed to a dance performer same gesture, s/he makes to continue a movement in same tempo and volume with her/his body.

In order to establish good communication in soundpainting performance, performers in the group have to know the gestures of soundpainting. Thus performers understand what

soundpainter want to do and they can response. One of the important points of good communication is soundpainters understandable and accurate manner to the group. About this idea Coşkuner (2013: 573) points out that “During the practice of soundpainting, good communication with the group is important. By this communication the movements that wanted, must be understandable and applicable by everyone. For this comes true that conductor has to be extremely clear and determine which group and what phrase to show.”

Visual Language

The language, which is a tool for transferring emotions and ideas from soundpainter/conductor to the group/community standing across her/him in direct or indirect way, is specific language for soundpainting. Requirement of express and transfer the features of a language is nourished, developed and brought to phenomenon of common language. From this point of view it must be said that language is a social phenomenon and compulsory it has to be systematic to communicate. So, we shouldn't ignore that visuals could have their own language. In this context for visual language Horn said that according to Rust (1999: 225) firstly, we tend to see things in an “either/or” context. It's either art or language. Secondly, visual language is a pidgin language; it is developing on the fringe of current languages. Thirdly, schools treat language and art as very separate disciplines. Finally, the visual aspect sometimes overwhelms the communication aspect.” This language has a feature to transfer in short time to more person with its' universal characteristic than oral and written language.

Avgerinou's (2011) view of visual language is like in basic levels the meaning of visual language is evident but we have to know that it has complex codes that must be learned to understand it. Truly, Avgerinou who is points out that we have to read the visuals, draws attention the connection between the perception of context/content and the previous experiences. According to Avgerinou the power of visual is that happening three times faster than reading and recognition happens in two or three seconds. From this point, an individual has to improve these skills for understand deeply so many visual language areas as moving/still routers, perceptual aesthetic areas, speechless communication skills, representation-symbol areas, body language.

Semiotic

There is a way to transfer open or hidden knowledge in sign language of soundpainting to written texts with a scientific methodology. This way passes through semiotic. Semiotic, which is the main purpose is to examine signs; is coming from Greek language: “*semiotic* word comes from *semeiotike* and *semiology* word comes from *semeion* (sign) and *logia/logos* (theory) (Rifat, 1992: 17). According to Barthes (2005: 29) semiotic has this classification: “language and talk, signifier and signified, denotation and connotation, syntax and system” which topics are both binary oppositions. The interpretation using these classifications called “Semiotic Interpretation” (Yerlikaya, 2015).

Sense of integrity can be between signifier and signified. Signifier can have different meanings or receiver give some other meanings to the sign. Sense of integrity can be between signifier and signified. Signifier can have different meanings or receiver give some other meanings to the sign. Bruton (1995: 40) said that “*signifier* to sign, *signified* to every single meaning potential and *signification* to the meaning given the indicator from receiver”. And the other term we must deal with is “Semantics”. To sense the meanings, hold inside the visual (it could be direct or indirect) by the receiver and transform signs to written texts can be called as *semantics* by using one or two classifications of the signs as language and say, signifier and signified, series and string, denotation and connotation.

Analysis

Because of the main aim is to be examined in pieces or/and a whole all the sign groups in sign language of soundpainting, it is compulsory to explain shortly the concept of “Analysis”. For this reason, analysis has these definitions in more than one area which has minor differences but same in the core: “process of putting forth the structure, mechanism and development roles of any topic or any object by separating into the components in real or in idea, dissection, the work of separating constituent elements into parts which is for scientific reason, working on a subject or a unit separately in teaching, separate, solve or shred the combined, separate into parts, elements, components a complicated whole for understand the structure (TLI, 2015).

Visual analysis is the process to use the methodology of analysis which the definitions of it given above on visual texts. With the increasing visualization, concept of *reader* changed to *onlooker* by using TV or computer instead of reading rooms or libraries (Genç & Sipahioğlu, 1990: 7). Visual analysis which is an important part of visual literacy (Yerlikaya, 2015), is claimed that turning the individuals, which are in *onlooker* position, to the individuals who can read the visual texts.

Visual Literacy

Framework of soundpainting is human and humans’ acts. From this point individuals reading skills of and writing visuals is another topic to taking into account. For this reason, it has a necessity to address the “Visual Literacy” issue. Visual literacy was opened to discussion from John L. Debes. And it is defined by him in 1969 according to Maria D. Avgerinou & John Ericson (1997: 281): “Visual Literacy refers to a group of vision-competencies a human being can develop by seeing and at the same time having and integrating other sensory experiences. The development of these competencies is fundamental to normal human learning. When developed, they enable a visually literate person to discriminate and interpret the visible actions, objects, symbols, natural or man-made, that he encounters in his environment. Through the creative use of these competencies, he is able to communicate with others. Through the appreciative use of these competencies, he is able to comprehend and enjoy the masterworks of visual communication.”

After the first definition of Debes, it is started to define from other aspects. Fransecky & Debes (1972: 9) try to extend the definition of visual literacy “refers to a group of vision – competencies a human being can develop by seeing and at the same time having and integrating other sensory experiences”. Petterson (1999: 136) is defining visual literacy as it “is a concept in which particular skills, knowledge, and attitudes can be thought and learned which enhance our abilities to communicate in a variety of forms”. Visual literacy is “a communication and thinking format as the other literacies” and “seeing the images and inferring from them is a perception action and at the same time it requires visual literacy skill” for Alpan (2008: 83). Learning how to develop their visual skills which is the most basic need is seems inevitable today. When an individual develops this skill and learn how to develop it, it assumed that this individual (learning via visuals) can see, differentiate, understand, analyze, interpret and evaluation visual tools as visual acts, symbols and objects. Also it will be a part of effective communication by creative usage of the (visual literacy) skills.

Methodology

The role of the researchers in this study was gathering the data, finding the results and analyzing the data, interpreting the data and making suggestions. This study is a qualitative study. For this study one of the researcher take the pictures and one of the researcher stays in the pictures to show the moves. After pictures taken, pictures merged, some arrows and pointers added to show the movements in two-dimensional environments.

41 gestures defined in 1st level of soundpainting creates its scope to be analyzed in this research. The first level of soundpainting gestures is the basic gestures of soundpainting language. Therefore, these gestures has been chosen for the analyze. Gestures can be gathered in have five groups. These gestures contain called *who*, *what*, *how*, *when* and *performers gesture*. If numbers need to said: 9 out of 41 gesture is *who*, 23 out of 41 gesture is *what*, 2 out of 41 gesture is *how*, 5 out of 41 gesture is *when*, 2 out of 41 gesture is *performers gesture*. Performers gestures are not pointed out by soundpainter. These gestures designed for performers signs. So, the analyze in this study was made with 4 group of gestures. And for each group, just one gesture chosen for analyze the visual. Additionally, the analysis of the visuals limited to music discipline area.

The visuals belong to the 4 group of gestures analyzed the classification of visual literacy. Classification of visual literacy was put forth by Yerlikaya (2015) in his PhD thesis. The titles and sub titles are: “**Accessing the Visual** (subheading: Visualization)”, “**Visual Codes** (subheading: Identifying and The Information of Visual Agreements)”, “**Analysing the Visual** (subheading: Visual Relations and Visual Comparison)”, “**Interpreting the Visual** (subheading: Biographic Interpretation, Comparative Interpretation, Archetypal Interpretation, Psychoanalytic Interpretation, Semiotic Interpretation, Interpretation Based on Technique, Intentional Interpretation and Interpretation Diversification)”, “**Evaluation of the Visual** (subheading: Positive Judgement, Negative Judgement, Implicit Judgement, Opposite Judgement and Comparative Judgement)”. In this study the titles which are useful were used. Some titles omitted and some titles added.

Results and interpretation

1. Group

Who: Gestures in this category shows who is performing the sign.

Accessing to the Visual

Visualization: Right now the reader accesses this visual by paper or digital screen.

Visual Codes

Defining the Visual: Gesture of “Whole Group” starts with natural position. Arms open both sides, continues the movement from down to up and ends with a circle up to the head.

Knowledge of Visual Contract: Circle evokes the concepts like a round table or a ring. It incorporates the constructs as whole, being together etc.

Visual Analysis

Visual Relations: It is seen that two hands located as a full-circle format up to the head. Considering the way of arrow, hands position coming from closed both sides and to the present position. Head is in the middle and looking across (Figure 1).

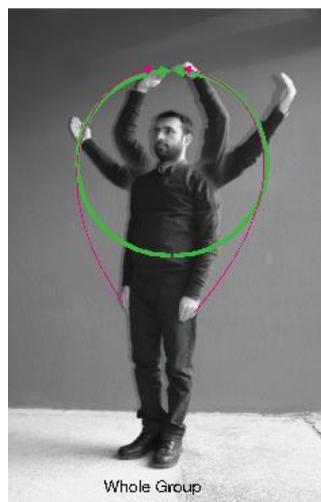


Figure 1. Whole Group. Photo: M. Yerlikaya.

Visual Comparison: It is seen that Soundpainter is in natural position and s/he didn't step in imaginary box (action turns into voice, picture, dance stands in front of her/him).

Visual Interpretation

Stylistic Interpretation: Posture of hands, which has a holistic visual, can mean that gathering in a central location, uniting, to include everyone.

Technical Interpretation: Technical interpretation is a gesture, which is used to definition whole group. It means all group.

Semiotic Interpretation

Denotation: Hands merging at a spot up to the head.

Connotation: It rings the bell for round objects like circle, ring.

Signifier: Hand.

Signified: Unity, everyone, all.

Syntax: It is understood that movement of the hands upwards and merging hands upwards by drawing circle.

System: This gesture means who is going to perform by, but it has a meaning coming syntaxes afterwards from this sign.

Visual Evaluation

Positive Judgement: It is positive because it has connective and rallying effect.

2. Group

What: Gestures in this category shows what the performers will do.

Accessing to the Visual

Visualization: Right now the reader accesses this visual by paper or digital screen.

Visual Codes: Long Tone gesture is showed in natural position. Both hands merged on chest line and forward as in this visual. Forefinger and thumb merged, as it seems that holding something. It accepted as start point and a straight line drawn from side to side. Being above or below from the chest shows the pitch of sound (Figure 2).

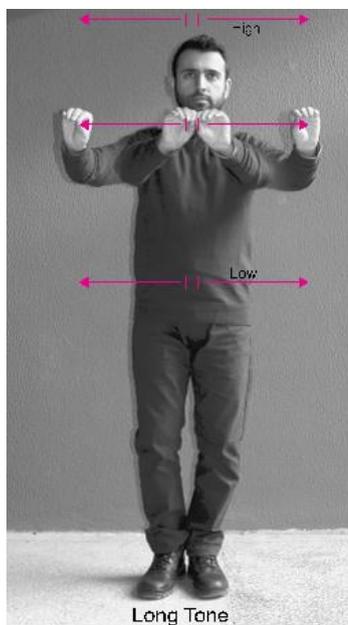


Figure 2. Long Tone. Photo: M. Yerlikaya.

Defining the Visual

Knowledge of Visual Contract: It embodies the basic knowledge of visual contract used from most societies the concepts like road, rope, skyline, removing the sword from its scabbard etc.

Visual Analysis

Visual Relations: Feet are inside the imaginary circle and it doesn't move. Massage delivered by the movement of the hands which were merged first and moved side to side. It is found out in the movement, opening position of hands happens below the center, it means it is *low* and if it happens above, it means *high*.

Visual Comparison: It is seen that Soundpainters' feet are still and s/he didn't step in imaginary box (action turns into voice, picture, dance stands in front of her/him).

Visual Interpretation

Stylistic Interpretation: We can interpret starting in a center creating hands making a line as a mark of permanent voice and sign of precession.

Technical Interpretation: Soundpainter points gesture in natural position. By her/his hands draw an imaginary line, s/he shows that s/he wants one voice/move/saying etc. which is permanent.

Semiotic Interpretation

Denotation: Hands go on side to side from the center and it stops at a certain point.

Connotation: It rings the bell for daily usage structures as rods, sticks, ropes (thin and flat).

Signifier: Opening hands both side like a line.

Signified: Long tone.

Syntax: It is stood in natural position on this gesture. It is monitored the sequence of merging hand on chest line as it seen in the visual and the movement of arms forward. And it continues with both arms opening to left and right as a straight line.

System: This gesture means that who is going to perform by, but it has a meaning coming syntaxes afterwards from this sign. For example, when it will start, low or high volume.

Visual Evaluation

Positive Judgement: Due to the necessity and involvement of coherent structures, it creates a positive impression.

Negative Judgement: Permanence of the movements' structure can form monotony depending the time.

3. Group

How: Gestures in this category shows how performers do the movements.

Accessing to the Visual

Visualization: Right now the reader accesses this visual by paper or digital screen.

Visual Codes

Defining the Visual: Volume Fader is an changing element which allows the change of movement or the voice. Soundpainter steps the imaginary box which is in front of her/him by one arm s/he creates a volume control bar and with the other hand s/he makes tampering with control bar (Figure 3).



Figure 3. Volume Fader. Photo: M. Yerlikaya.

Knowledge of Visual Contract: Movement reminds the tool used in analog devices for up/down the volume. At the same time, it shows similarity with the barometers which is mercury-filled reservoir. We saw that it contains similar movements between the area of the movement with the posture of the hand and movements of levers as elevator and crane. It can be added some other examples.

Visual Analysis

Visual Relations: when looked the posture of two arms, it can be seen the “V” position. Holding forefinger and middle finger is open and the other fingers are closed position, creates a little “V” position. We saw the other hand is punch (close) position.

Visual Comparison: This movement is started with any foot get in the box as in 4th movement.

Visual Interpretation

Biographic Interpretation: It can be said that there is a similarity between the contents in the codes of the movement and increasing and decreasing the volume in this gesture by the performer.

Technical Interpretation: Technically, soundpainter steps her/his feet from her/his natural position to in an imaginary box. Volume control bar was created by her/his left or right arm. With the other arm, s/he moves up and down over the line that s/he created. By this way, it is aimed to change the volume values on the material of performers.

Semiotic Interpretation

Denotation: Movement of hand and arm up and down together.

Connotation: Especially, it has similarities with the volume control tool used in analog sound tools.

Signifier: Hand, arm, foot.

Signified: Movement editing showed depending soundpainters’ hand and arm signs.

Syntax: The order is: First the movement of foot and after that hands moving from natural position to the position in the picture and the hand moves up and down over the volume line.

System: Action starts with not only moving from natural position of the foot to forward but also hands movement as the visual in the system of this movement Action starts with the hand movements.

Comparative Interpretation: This movement is started with any foot get in the box as in 4th gesture.

Visual Evaluation

Positive Judgement: This movement allows changing the dynamics thus it adds diversity and richness to the composition.

4. Group

When: Gestures in this category shows when the performers begin and stop the perform.

Accessing to the Visual

Visualization: Right now the reader accesses this visual by paper or digital screen.

Visual Codes

Defining the Visual: It is started *play* gesture in natural position. First soundpainter waits in natural position and for turning a voice and a movement the gesture pointed by the soundpainter, s/he steps into an imaginary box (2-meter length and 1-meter width) and s/he extends forward her/his hands like a gunfighter (Figure 4).

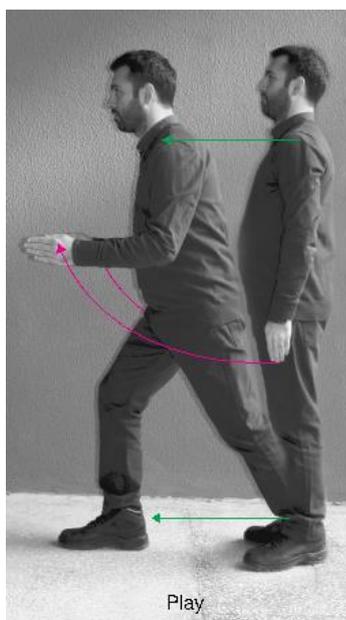


Figure 4. Play. Photo: M. Yerlikaya.

Knowledge of Visual Contract: Similar movement codes like police, directional motions of the hostess, starting and stopping motion of mechanical shifts etc.

Visual Analysis

Visual Relations: Passing process of the still position to moving position is seen in the visual. It is seen that all the parts of the body moving all together via the movement of both hands at the same direction at the same time, showing the same direction by hands, face supporting hands and the movement of the food to forward.

Visual Comparison: Hand direction is open, face direction is on the parallel, all of the body is towards across supporting the hand, face and feet are outside of the still position.

Visual Interpretation

Biographic Interpretation: *Play* gesture can be said the first movement which turns into action the gestures showed before.

Technical Interpretation: Technically, stepping inside of the imaginary box from standing in natural position and hand movement towards front and up shows the time when the gesture starts.

Semiotic Interpretation

Denotation: Movement of the hand forward.

Connotation: It rings the bells for pistol position and hand positions in shall stand position.

Signifier: Hand, foot, face.

Signified: Starting movement as a clear command.

Syntax: First the movement of the foot and after that the position of hand comes from natural position to final position shown in visual.

System: In the system of this movement, staying in natural position of food but movements of hands can't provide the action happens. Action starts with the movement together of hand, face and foot.

Comparative Interpretation: This movement is started with any foot get in the box as in 2nd and 3rd gesture.

Visual Evaluation

Positive Judgement: After having examined this gesture, the transformation of state action from inertia has concluded is a positive side.

Negative Judgement: It has negative connotations (military connotations) like taking arms or put into a line.

Results

It was seen that if you examine the basic movements in Soundpainting language, these movements have some common features with technological tools and real life movements. It is possible to say that these movements have universal contents. It was seen that it has benefited the feature of visual language, which is much more easily understandable than written language. This features present in Soundpainting has qualifications for ease teaching to different cultures. It was found that Soundpainting language has visual contents that everyone ensures to easily learn even they don't know Soundpainting language, even they deal with an art area or they don't. They can easily learn no matter what the age is, nationality, language, religion, gender etc. Performers give sometimes specific, sometimes surprise responses for the pointed gestures which will be conducted on the material (Group 2) by Soundpainter.

Suggestions

Semantic analysis can be done for the other gestures except the gestures above. It is suggested that sound painting dictionary can be prepared. It is important to be able to access massive number of people. It is important to expand these gestures by using universal power of visual language with regard to the hearing deprive individuals' participation of areas as such music. Today, it is provided to perceiving the sound waves by a special wear for hearing deprive individuals. In this way hearing deprive individuals feel the sounds. It can be provided to be an active part of art by Soundpainting visual language and this feeling talked above for hearing deprive individuals.

Kopsavilkums. *Skaņkrāsošana ir sinhrona, universāla kompozīcijas zīmju valoda, ko ir veidojis komponists Valters Tomsons (Walter Thompson), tā ir domāta mūziķiem, dejotājiem, dzejniekiem un vizuālajiem māksliniekiem, kas darbojas improvizācijas jomā. Pašlaik skaņkrāsošanas valodai ir vairāk nekā 1500 zīmes. Šajā pētījumā, skaņkrāsošanas pirmajā līmenī, tika izskatīta vizuālo tekstu pārveide rakstītos tekstos, žesti, kustību vizualizācija. Šajā pētījumā tika arī veikta saturs analīze. Pēc datu analīzes, tika atklāts, ka skaņkrāsošanas zīmju valodas žestiem ir kopīgas iezīmes ar ķermeņa valodu ikdienas dzīvē. Tāpat arī tika atklāts, ka šiem žestiem ir universāla saziņas valoda, kam nav robežu kā tas ir valodai vai dzirdes zaudēšanas gadījumos.*

List of Literature and Bibliography

- Alpan, G. (2008). Görsel Okuryazarlık ve Öğretim Teknolojisi, *Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi*. 5 (2) (pp. 74-102).
- Aslan, H. (2012). Gelecekçi Sanat Eğitimi Modellerine Temel Oluşturması Bakımından Görsel Okuryazarlık ve Eleştirel Pedagoji İlişkisi, Ondokuz Mayıs Üniversitesi Eğitim Bilimleri Enstitüsü. Yayınlanmamış doktora tezi, Samsun.
- Avgerinou, M. & Ericson, J. (1997). A Review of the Concept of Visual Literacy, *British Journal of Educational Technology*, 28 (4).
- Becer, E. (2002). *İletişim ve Gafik Tasarım*. Ankara: Dost Kitabevi Yayınları.
- Bruton, G. (1995). *Görünenden Fazlası*. İstanbul: Alan Yayıncılık.
- Buehl, D. (2014). *Classroom Strategies for Interactive Learning*, *International Reading Association*. New Jersey: Forth Edition.
- Coskuner, S. (2013). Soundpainting ve Müzik Eğitiminde Kullanılabilirliği. IV. Uluslararası Hisarlı Ahmet Sempozyumu. 6-8 Haziran 2013 Kütahya.
- Coskuner, S. (2016). Affect Of Soundpainting Lesson In Increasing The Motivation For Listening To Aleatoric Music. *Middle-East Scientific Research Journal*. 24 (1) (pp. 15-21).
- Fransecky, R. B.; Debes, J. L. (1972). *Visual Literacy: A Way to Learn-A Way to Teach*. Washington: Association for Educational Communications and Technology.
- Genç, A.; Sipahioğlu, A. (1990). Görsel Algılama, Sergi Yayınevi, İzmir.
- Guiraud, P. (1994). *Göstergebilim*. Ankara: İmge Yayınları. İkinci Basım.
- Graphic Organizers. (2003). A Review of Scientifically Based Research, The Institute for the Advancement of Research in Education at AE, Inspiration Software, Inc.
- Horn, R. E. (1999). Visual Language, *Journal of Visual Literacy*, Volume 19, Number 2, (pp. 225-226)
- Kellner, D. (1998). Multiple Literacies And Critical Pedagogy In A Multicultural Society, *Educational Theory* 48 (1) (pp. 103-122).

15. Messaris, P.; Humphreys, L. (2006). *Digital Media: Transformations in Human Communication*. New York: Peter Lang Publishing, Inc.I. Print.
16. Petterson, R. (1999). *Visual Information, Educational Technology Publication*. New Jersey: Englewood, Cliffs.
17. Rıfat, M. (1992). *Göstergebilimin ABC'si*. İstanbul: Samavi Yayınları.
18. Rose, G. (2003). *Visual Methodologies*. London: SAGE Publications Ltd., British Library Cataloguing in Publication Data.
19. Thompson, W. (2006). *Soundpainting Workbook I*. New York.
20. Uzuntaş, A. (2013). Etkili İletişim: Anlatılabilmek ve Anlayabilmek. *Kastamonu Eğitim Dergisi*. Cilt: 21 No: 1 (pp. 11-30).
21. Yerlikaya, M. (2015). Güzel Sanatlar Eğitimi Bölümü Resim-İş Eğitimi Anabilim Dalı Öğretmen Adaylarının Görsel Okuryazarlıkları, Ondokuz Mayıs Üniversitesi Eğitim Bilimleri Enstitüsü, Yayınlanmış Doktora Tezi, Samsun.
22. Yıldırım, A.; Şimşek, H. (2008). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri*. Ankara: Seçkin Yayıncılık.