The Effect of Teachers’ Level of Visual Use on Students’ Visual Reading Skills: Comparison Between the Students of Expert and Novice Teachers

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Abstract
The aim of this study is to examine the effect of history teachers’ visual usage level on high school students’ visual reading skills. This qualitative research, consisting of two stages, was carried out using a holistic multi-case study design. In the first stage, 19 history teachers were observed in the classroom and their visual usage status in history lessons was determined (Aslan, 2015). Among these 19 teachers, a total of 4 teachers, 2 experts, and 2 novices, were determined according to their visual usage levels, and the second stage of the research was conducted with their students. The study group consisted of 92 high school students who agreed to participate in the study on a voluntary basis among the students of the teachers identified in 4 high schools. The data required for the research was gathered via “Visual Reading Level Form” which developed by the researchers. Visual Reading Level Form aims to determine the visual reading skill levels of the participants in related sub-skills such as; estimating time and space, identifying persons, events and symbols, recognizing propaganda, understanding the message, and the historical importance of visual. According to research findings, in almost all sub-skills determined in this study, the students of the expert teachers were more successful than the students of the novice teachers. This shows that teachers’ higher levels of visual use precipitate an increase in their students’ visual reading skills.

Keywords: visual reading skills, teachers’ visual use, history teaching, high school students

1. Introduction
Historians have defined the sources of history as: “artifacts of the recent and distant past that have been passed down to the present” (Baymur, 1945, p. 37); “all the documents and remnants arising from the social lives of human”; and “all the information, documents,, and remnants coming from the event itself” (Köstüklü, 2001, p. 14). Based on these definitions, we can define the sources of history, as all kinds of documents and objects that provide information about the past and carry the traces of the past to the present day (Acun, 2011).

However, it is not correct to describe every material that gives information about the past as a source. Because, in order to qualify a material as a source, it must either be written or created in the period in which the information it contains, or it must have been created by using sources close to those periods (Kütükoğlu, 1998). In this respect, the sources of history are classified as first-hand sources and second-hand sources according to the period in which they are created, and whether they transfer information directly or indirectly.

The sources of history (primary or secondary) are not only materials used by historians for the construction of historical knowledge, but also materials used by teachers for the transmission of this knowledge. Therefore, these sources contribute to both the formation of historical knowledge and the teaching of this knowledge. Using these resources in the classroom enables students to acquire the skills of seeing facts, making inferences, formulating ideas while learning history (Craver-Kathleen, 1999, p. 8). Document-based teaching is a method that saves the student from passivity and history classroom from monotony because it requires working and producing like a historian. This intriguing method allows students to listen to the lesson more carefully, keeps the discussion environment alive in the classroom and contributes to the development of critical thinking skills.
At the same time, reading and comparing different types of primary sources provides students with multiple perspectives, helping them to discover the ways in which people document their stories throughout history (Bell-Russel, 2011, p. 2).

Visual sources, such as paintings, photographs, miniatures, posters, cartoons, drawings, engravings, maps, graphics etc. are crucial in writing and teaching of history since they contain richer and multidimensional historical information than written texts. Visual sources also create multiple perception effects in receptors, which evoke a sense of clarity and accuracy (Spencer, 2011). The permanence of the learned knowledge increases in the classroom if more sensory organs of the recipients (students) are addressed (Başboğaoğlu, 2012, p. 69; Kaya, 2006).

Another benefit of using visual resources in history classes is to help students develop “visual-literacy skills that are becoming increasingly important in today’s world. Debes (1968), one of the first to describe this concept, which emerged in the 1960s (Alpan, 2008), describes visual literacy as a range of visual competencies developed through eyesight (Sanalan, Sülün, & Çoban, 2007, p. 34). Bleed (2005, p. 5) defined visual literacy as the ability of understanding visual messages, comparing them with the information obtained from other sources, developing an interpretation based on this, and finally producing new visual messages. As a result of the scientific and technological developments, and the rapid introduction of visual and audio communication tools into our lives has drawn us into an intensely visual world. People in this visual world must develop visual literacy competencies to interpret and analyze visual messages in order to grasp the correct meanings of them (Zeren & Arslan, 2009). This new situation creates a new task for teachers which are to teach reading visual information as well as written information (Aslan, 2013). Visual literacy education improves students’ thinking, decision-making, learning and communication skills (NCREL & Metiri Group, 2003, p. 24) by providing the opportunity for students to use their comprehensive skills and creative abilities on almost all observable objects (Kaptan & Aslan, 2012).

In this respect, the use of visual resources in history teaching and especially incorporating visual analysis activities will help students develop historiography, research, visual literacy, thinking and communication skills as well as increase their interest in history and history lessons by breaking the monotony. Unfortunately, previous studies show that history teachers’ have low levels of effective use of visual materials in history classrooms (Aslan & Turan, 2016). In theory, as teachers’ use of visual resources increases quantitatively and qualitatively, it will lead to a positive change in students’ visual reading levels. The aim of this study is to determine whether the visual usage levels of teachers have an effect on the high school students’ (9th and 10th grade) visual reading levels.

2. Method

2.1 Research Model

This research, which was organized as an expert-novice comparison, was conducted with a qualitative approach and an integrated multi-case case design. The multi-case case design is the study in which “an instrumental case study is extended to include a large number of events to learn more about the phenomenon, the universe, or the general situation” (Punch, 2014, p. 144). According to Merriam (2013, p. 194), multi-case studies “require data collection and analysis in many cases”. According to Yıldırım and Şimşek (2013, p. 327), in multiple case design “there is more than one situation that can be perceived as holistic by itself. Each situation is handled in its entirety and then compared to each other”. According to Christensen, Johnson, and Turner (2015, p. 418), the collective case study is “the study of multiple cases for comparison purposes”.

In this study, by comparing the students of the novice and expert teachers (in terms their visual use level) with the help of holistic multi-case case design, it is tried to determine whether there is a relationship between the visual use level of the teachers and the visual reading skills of the students.

2.2 Study Group

The study group was selected among high school students of history teachers whose visual usage levels were determined in a previous study which was aiming to reveal the level of visual use of teachers through classroom observation (Aslan & Turan, 2016). Among the 19 high school history teachers observed in the Erzurum district of Turkey, two experts and two novice teachers were determined according to their level of visual usage. The clear difference between expert and novice teachers in terms of visual selection and use skills can be seen in the following tables.
Table 1. Expert and novice teachers’ visual selection skills for classroom use

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Observation Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experts (n=2)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Sharing the source of images</td>
<td>✗</td>
</tr>
<tr>
<td>Asking questions to students about the images</td>
<td>✗</td>
</tr>
<tr>
<td>Allowing students to express their views on the images</td>
<td>✗</td>
</tr>
<tr>
<td>Enabling students to discuss images</td>
<td>✗</td>
</tr>
<tr>
<td>Being tolerant of different ideas during visuals analysis activities</td>
<td>✗</td>
</tr>
<tr>
<td>Explaining the message of the images</td>
<td>✗</td>
</tr>
<tr>
<td>Explaining the symbols in images</td>
<td>✓</td>
</tr>
<tr>
<td>Using multiple images that represents a different point of views on the same topic</td>
<td>✓</td>
</tr>
<tr>
<td>Using images to reveal different views about past events</td>
<td>✓</td>
</tr>
<tr>
<td>Not using images as background</td>
<td>✗</td>
</tr>
</tbody>
</table>

Table 2. Expert and novice teachers’ visual use skills in classroom

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Observation Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experts (n=2)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Choosing proper and right images for the subject</td>
<td>✗</td>
</tr>
<tr>
<td>Selecting multiple images on the subject</td>
<td>✓</td>
</tr>
<tr>
<td>Selecting images in various formats</td>
<td>✗</td>
</tr>
<tr>
<td>Selecting age-appropriate images for the student</td>
<td>✗</td>
</tr>
<tr>
<td>Paying attention to color, quality and resolution level of the images</td>
<td>✓</td>
</tr>
</tbody>
</table>

Since there are no compulsory history courses in 11th and 12th grades in Turkish high schools, 9th and 10th-grade students of the expert and novice teachers were invited to participate in the study. A total of 92 9th and 10th graders in four different high schools accepted to participate in the research on a voluntary basis. Then, these students were divided into two groups for comparison: Group-1 (n = 47) represented the students of the novice teachers, and group-2 (n = 45) represented the students of the expert teachers.

2.3 Data Collection Tool and Process

In order to determine high school students’ visual analysis skills a “visual reading level form” was developed by the researchers. Analyzing students’ visual reading skills through a single visual format will not yield reliable results. On the other hand, a scale covering all types of visual formats would not be applicable to the students in this age group. Therefore, the visual types to be included in the data collection tool were limited and a form containing only three different formats was developed.

Visuals used in this form were selected not only in terms of genre but also in terms of the preliminary knowledge and skills required for visual analysis. The form consists of three tasks. The first task requires students to analyze and compare two photographs which require less factual and symbolic knowledge, and visual reading skills compared visuals in the next two parts. In this part, two photographs of Galata Bridge taken from the same angle in the 1920s and 2000s were used and the students were asked to make comparisons between them. The second task requires students to analyze a 16th-century Ottoman miniature depicting the seizure of Istolni-Belgrade castle, drawn by frescoer (Nakkash) Osman and his team in 1588. Finally, the third task requires students to analyze a World War I poster produced in the USA by the American government. For the students to understand, the original English expressions on the poster have been translated into Turkish.

The Visual Reading Level Form consists of 28 open-ended questions aimed to measure nine visual reading sub-skills by using four different visual materials in three sections. The suitability and reliability of the visuals selected by the researchers and the questions used in the form were controlled by four academicians and two high school teachers. The pilot study was carried out by applying the form to 23 high school students then “Visual Reading Level Form” was finalized by making necessary corrections in line with the feedback received from the students. The data required for the study was collected by applying visual reading level form in the classroom environment after obtaining the necessary legal permissions from school administrations and parents.
2.4 Data Analysis

The written answers given by the high school students to the 28 open-ended questions in the 3 sections of the Visual Reading Level Form were analyzed by the content analysis method. Through these analysis students’ visual reading skill levels in 9 areas: “estimating time and place, showing evidence, identifying people, event, message, and symbols, recognizing propaganda, and the historical value of the visual resources” were determined. The data obtained from the content analysis were summarized as frequency tables and a comparison was made between the students of the novice and expert teachers (Group-1 and Group-2).

3. Results

In this section, the findings will be presented comparatively between the group-1 and group-2 under the relevant sub-skill.

3.1 Analyzing and Comparing Photos

In this task, students were given two photographs from the 1920s and 2000s (see Figure 1 and Figure 2) taken from the same angle, looking towards Galata tower in the Golden Horn region of Istanbul. The students were asked to analyze these photographs according to the 5 open-ended questions located in this section.

Figure 1. Photograph showing the Golden Horn region of Istanbul in the 1920s (http://www.ekopangea.com/wp-content/uploads/2015/05/galatakoprusu.jpg)
3.1.1 Identifying People

Students in both groups did not have much difficulty in identifying the people and objects in these images. Although students in group-1 (novice teachers’ students) identified more elements, the students in group-2 (expert teachers’ students) were able to give more detailed explanations. For example, to identify people in the first image students from group-1 used the term “Ottoman people” while the students in group-2 used more detailed descriptions such as “people dressed in Ottoman style” or “people dressed in Western-style as well as classical style”. Also, the definition of “persons wearing fez”, which is a good indicator of concept knowledge, was used by only 3 students in group-1, whereas this concept was used by 23 students in group-2.

3.1.2 Estimating Time

Most of the students in both groups predicted the date of the first image incorrectly, on the other hand, due to much familiar objects and vehicles that appear in it, students from both groups did not have difficulty in predicting the date of the second image. Students in both groups have provided accurate and logical evidence, such as architectural structures, means of transportation, clothing, etc. to support their date prediction. Two of the students in Group-2 by referring the tulip motifs on the bridge, they were able to establish a connection between the 2010 European Capital of Culture event and predict the date of the photograph quite accurately.

3.1.3 Estimating Place

Students in both groups predicted the place in these images as “Istanbul” to a great extent. Few of the students in Group-2 used more specific predictions such as Galata Bridge and Golden Horn rather than Istanbul. 30% of students in group-1 proposed accurate evidence to support their predictions such as Galata Tower, Galata Bridge, and Golden Horn, while this rate increases to 70% in group-2.

3.1.4 Recognizing the Historical Value of the Photographs

The students in group-1 stated that the photographs could provide historical information in five areas; Technology level (6), Lifestyle (6), Architectural style (4), Transportation (4), and Clothing (4). The students in the group-2 also identified five areas but their order changed, and the number of students supporting these judgments has increased; Means of transportation (17), Clothing, (12), Technology level (9), Lifestyle (8), Architectural style (4).

3.2 Poster Analyzing

In this task, students were given a poster from WWI (see Figure 3) period prepared by the American government in order to obtain economic support from society. The English expressions in the original poster were translated into Turkish. The students were asked to analyze the poster according to the 7 open-ended questions located in
As can be seen in Table 3, students in Group-2 are more successful in predicting the people portrayed in the poster than students in Group-1. The students in Group-2 used the term American soldier (n=23) in the first place while the students in Group-1 failed to identify the American soldier in the poster and used the term “soldier”, which is an incomplete characterization. Although it is a low number, three students in group-2 were able to identify the German soldier, while no one in group-1 could identify the German soldier in the poster. In this task, group-1 students gave 26 correct and 29 wrong answers while group-2 students gave 11 correct and 33 wrong answers.

On this poster weapons, clothes, symbols, and text can be used to identify the people. 19 students in group-1 used these indicators as proof for their estimations while 16 used not-appropriate evidence and 10 specified no evidence at all. On the other hand, 23 students in group-2 used indicators above as proof for their estimations,
only 2 used not-appropriate evidence, and 12 specified no evidence at all.

3.2.2 Estimating Time

27% of the students in group-1 and 48% of the students in Group-2 estimated the date of the poster correct and stated that the poster was from World War I period. 46% of the students in group-1 and 64% of the students in group-2 provided accurate and logical evidence such as weapons, clothes, overall quality of the image, and the text.

3.2.3 Identifying Symbols

Only 2 students in group-1 and 12 students in group-2 answered correctly about the intended use of the symbols on the poster such as the cross, blood, flame, pose, etc. Most of the wrong answers of the students stem from the fact that they misidentified people on the poster as Hun, Ottoman or Turk based on the text stating “Halt the Huns”.

3.2.4 Identifying Message and Recognizing Propaganda

Only 12 students in group-1 stated that the poster was made by Americans, but only one of them realized that the purpose of the poster was “selling American war bonds”. On the other hand, 40 students in Group-1 stated that the poster was made by the Americans and 23 of them realized that the purpose of the poster was “selling American war bonds” or “providing economic support to the army”.

Only two students in group-1 described the message of this poster as to providing public support for the war, on the other hand, 19 students in group-2 perceived the message correctly. Among them 12 students described the message as “providing economic support to the country”, 3 students described the message as “informing the people about the war and asking for economic support”, 3 students described the message as “the people’s life would be in danger if the country did not receive financial support”, and one student described it as “America should be supported in war”.

3.2.5 Recognizing the Historical Value of Posters

9 students in group-1 stated that the poster could provide information about weapons of the time period and it allows us to understand that these years are war periods. 33 students in group-2 stated that the poster could provide information about “war period, clothing, weapons, economic situation and the actors of the war”.

3.2.6 Realizing What Additional Information is Needed to Analyze the Image Accurately

In this section, another question was used to reveal whether these students were able to realize what additional information they needed to analyze the poster more accurately.

Table 4. Identifying the additional information needed to analyze the poster accurately

<table>
<thead>
<tr>
<th></th>
<th>Date</th>
<th>Nationality</th>
<th>Producer</th>
<th>Purpose</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Correct</td>
</tr>
<tr>
<td>Grup-1</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Grup-2</td>
<td>14</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>19</td>
</tr>
</tbody>
</table>

According to students’ statements, additional information was needed on the nationalities of the soldiers, date, producer and the purpose of the poster. The answers of the students in both groups and the number of correct and incorrect answers are quite similar.

3.3 Miniature Analyzing

In this task, high school students are given a 16th-century Ottoman miniature depicting the seizure of Istoni-Belgrade Castle drawn by frescoer (Nakkash) Osman and his team. The students were asked to analyze the poster according to the 6 open-ended questions located in this section. Since it would be very difficult for high school students to find out the date, the artist and the place depicted in the miniature, unlike other tasks, this information was given under the image as follow: “Miniature depicting Istoni-Belgrade Castle dated 1588 by frescoer (Nakkash) Osman and his team”. As the students were asked to estimate the event, the term “seizure” was not included in the information note.
3.3.1 Identifying People

Group-1 students used 26 different identifications in this question. However, most of them are misidentifications. The most common identification used by these students is the soldier which followed by “people”, “janissary”, “caller of daily prayer” and “statesmen”. Some students also included architectural structures such as “house, palace, mosque, church, madrasah, etc. in their answers. However, in this question, they were not asked to describe the place.

Group-2 students used fewer identifications (11), but only 2 of them were misidentified. These students included statements such as “banner-bearers”, “guards”, “caller of daily prayer”, “people carrying loads”, “janissaries”, “statesmen”, and a very general identification “those living in the Belgrade castle”.

3.3.2 Identifying the Event

Although the information note given under the poster, it seems all students in Group-1 disregarded this explanation and misidentified the event described in miniature. Only two students gave somewhat close answers in the form of “loot gathering” and “how the siege of a castle was made during the Ottoman period”. On the other hand, the majority of the students in group-2 (n=32) described the event as the “seizure of Istojni-Belgrade castle”.

3.3.3 Identifying the Message

Students in group-1 gave more answers to this question than the students in Group-2, but group-2 students managed to give more correct answers. Only 7 students in group-1 have given acceptable answers such as “Ottoman is a tolerant state”, “how to guard a castle”, “how the siege of a castle was made during Ottoman period”, and by looking at the load-bearing soldier “how booty gathering was made”.

The message that “Ottomans were a tolerant state” also the most common answer for students in group-2 (n=21). They supported this argument with their statements that “freedom of worship was guaranteed” and “religious places in seized areas were intact”. Other acceptable correct answers of group-2 students are; “the seizure a fortress and turning it into a Turkish (Ottoman) fortress”, “things that were done after the seizure of a place”, and by referring the caller or daily prayer “that place now officially belongs to a Muslim state”. 
3.3.4 Identifying Symbols

The students in both groups were able to answer this question highly accurately. In general, the students of both groups stated that the objects like flags, banners, cross, tents, architectural structures, and clothes have symbolic meaning such as architectural structures, tents and clothing were close to each other. But only two students both from group-2 have managed to identify the most important symbol in this miniature; “calling daily prayer”.

3.3.5 Recognizing the Historical Value of Miniature

While the students in group-1 stated that miniature could provide information about “social life, Ottoman period, clothing, architectural structures, and religious structures”, the students in group-2 were focused on “military equipment, social life, clothing, architectural structures, religious structures, the work has to be done during and after the seizure, and the defense strategy”.

4. Conclusion

Visual elements, which have an important place in history writing and teaching, appear in almost every aspect of our daily life. In today’s World, which is full of visual messages it is necessary for us to have visual literacy skills in order to grasp the correct meanings of these images, and not to be the victim of propaganda. Students’ ability to read and analyze visual materials such as posters and banners correctly is one of the important goals of history education today (Stradling, 2003). We must enable our students to read and learn written materials as well as to teach visual literacy, which has become an important aspect of modern educational environments.

Researchers encourage history teachers to include more visual materials in their teaching and perform visual analysis activities (Şimşek, 2012). Because, in theory, it is predicted that teachers’ use of visual resources will increase students’ visual reading levels. This research was conducted to test this claim. In this study, we tried to determine whether the high school history teachers’ visual usage levels have a positive effect on their students’ visual reading/analyzing levels. Since visual literacy is a broad and abstract concept it was divided and examined under nine sub-skills (estimating time and place, showing evidence, identifying people, event, message and symbols, recognizing propaganda, and the historical value of the visual resources) in order to achieve a more realistic measurement.

The results of the study showed that in almost all sub-skills tested on three different tasks by using three different image format students in group-2 have achieved more successful results than students in group-1 students. Group-2 students managed to provide more diverse and more accurate answers to almost all questions. Therefore, the results of this study support the claim that teachers’ use of visual resources in history classrooms has positive effects on students’ visual reading levels.

However, the acceptable or correct answers given by high school students in this study even for the students in group-2 were below the desired level. This is especially clear in questions about the message and the reliability of the images. This situation reveals that history teaching in Turkey fails to teach necessary visual literacy skills to high school students.

The results of the research are consistent with similar studies. In his study on the use of photography in history teaching Akbaba (2003) found that the students in the groups where photography was used with an analytical method were more successful than the students in the groups using the traditional method. In the study conducted by Hali (2003), it was determined that the use of photography and painting in the Turkish Revolution History course was effective in increasing student academic achievement. In the study conducted by Sucu (2014), it was concluded that the use of photography in history teaching in 3rd grade was effective in increasing student achievement and attitude towards the course.

5. Recommendations

Based on the findings of the study, the following suggestions can be made to increase students’ visual reading skill levels;

• Today many students see history lessons very boring and full of memorization (Demircioğlu, 2005). Visuals are not only effective teaching tools, but they are also interesting and fun, which could save traditional history lessons from this frustration.

• Instead of using visual materials in the classroom as a mere décor, teachers should treat images as sources of information by giving students the time to analyze the image, using guiding questions, and letting them express their views.

• Many teachers, unfortunately, don’t have the necessary knowledge and skills to use visual resources as a teaching tool in history class. In order to overcome this deficiency, in-service training seminars for teachers
should be organized in cooperation with the Ministry of National Education and universities.

- Finally, teacher training programs should adapt their teaching to target teacher candidates’ visual literacy knowledge and skills. This knowledge and skills can be adapted to existing courses such as “Special Teaching Methods” and “Instructional Technologies and Material Design”.

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References


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