Las Visual Thinking Strategies (VTS) desde la perspectiva del educador patrimonial. DAFO del método en su aplicación práctica

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Abstract

The aim of this research is to reveal the insights of the educators at the Barcelona Picasso Museum regarding the implementation of Visual Thinking Strategies (VTS), an increasingly popular teaching method used in museums. For this qualitative case study, approached from a constructivist perspective, we used techniques and methodologies corresponding to ethnographic research in education, more precisely, semi-structured interviews. The participants are eight museum educators, two men and six women, who regularly use VTS during Catalan schools' visits to the Picasso Museum. The results, which have been analysed using qualitative content analysis techniques, show the strong and weak points of VTS. The data reveals that its strengths are related mainly to the artwork and the school group, highlighting how the method can encourage public

participation and change the way students approach artworks: all of these strengths match several theoretical studies of VTS. As for weaknesses, educators have referred mainly to those connected with strategies concerning the method itself, the educator, the context and the public; negative aspects which have been discussed in previous studies. The results allow us to conclude that Barcelona Picasso Museum's educators perceive many more strengths than weaknesses in VTS; the strengths being indicative of the need for educational renewal in museum education whilst the weaknesses are related to the frequently encountered resistance towards new methodologies from people educated in traditional educational systems. Data also suggests that more experienced educators detect more difficulties in the implementation of Visual Thinking Strategies than those who are new to the field.

Keywords: museum educator, insights, Visual Thinking Strategies, thinking skills, educational strategies, heritage education, museum education, arts education.

Resumen

La finalidad de esta investigación es mostrar la percepción que los educadores patrimoniales del Museo Picasso de Barcelona tienen sobre la práctica en su centro de trabajo de las *Visual Thinking Strategies* (VTS)*,* un método didáctico cada vez más popular en los museos. Para este estudio de caso de tipo cualitativo, enfocado desde una perspectiva constructivista, se han utilizado técnicas y metodologías propias de la investigación etnográfica en educación, en este caso, entrevistas semiestructuradas. Los informantes son los ocho educadores, dos hombres y seis mujeres, que aplican de manera regular este método en las visitas de escuelas catalanas al museo. En relación a los resultados se han detectado, a partir de un análisis temático de contenido, los puntos fuertes y débiles del VTS. Se observa que los aspectos positivos se refieren principalmente a aspectos vinculados a la obra de arte y al grupo escolar, destacando las posibilidades que ofrece para motivar la participación del público y cambiar la forma en que el alumnado se acerca a la obra de arte; puntos fuertes que coinciden con distintas aportaciones teóricas. En relación a los puntos débiles, los educadores han aludido principalmente a factores vinculados con las estrategias del propio sistema de enseñanza-aprendizaje, con el educador, el contexto y el público, aportando luz a través de su experiencia a las críticas preexistentes. Los resultados permiten concluir que los educadores perciben muchas más fortalezas que debilidades en el VTS, siendo las primeras indicativas de la necesidad de renovación didáctica en la educación museal hacia estrategias de implicación del alumnado y estando las últimas relacionadas con las reticencias que generan las nuevas metodologías en aquellos educados bajo sistemas de enseñanza transmisivos.

Palabras clave: Educador, museo, percepción, método educativo, sentido crítico, didáctica del museo, educación patrimonial, educación artística.

Introduction

This article presents a qualitative assessment of the insights of the museum educators at the Barcelona Picasso Museum (BPM) regarding the implementation of the pedagogical method Visual Thinking Strategies (VTS). The results it sets out are part of ongoing research intended to evaluate the attainment of the learning objectives set by the museum, and analyse the attitudes of the actors involved regarding the implementation of VTS. This extensive study is based on a mixed methodology aimed at the triangulation of phases and instruments: non-participating observation in museum galleries; questionnaires given to teaching staff and pupils; and interviews with the museum education department and museum educators. It is in line with research such as that headed by Calaf[2] into the evaluation of educational programmes in museums (Suárez, Gutierrez, Calaf and San Fabián, 2013).

In response to the issue of the absence of studies describing and evaluating positive and negative aspects of VTS – and indeed the absence of evaluations of educational methodologies in museums in general – from the point of view of museum educators, this publication has opted for presenting and discussing the results obtained from them. The specific aim of this article is to describe the positive and negative aspects of, according to participants, this new pedagogical system with regards to their own experience in the museum.

Visual Thinking Strategies: Origin and aims of a teaching-learning method

VTS is a method of cognitive and aesthetic development for stimulating critical thinking through art (Hailey, Miller and Yenawine, 2015). It was created by psychologist Abigail Housen and the then director of the education department of the MoMA New York, Phillip Yenawine. Starting from Housen's research into states of aesthetic development, and the need to offer a new pedagogical system which motivated and encouraged participation in museum visitors (Carr, 2016), they both questioned

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[2] The research and development project entitled *Evaluación Cualitativa de Programas Educativos en Museos Españoles* (Qualitative Assessment of Educational Programmes in Spanish Museums) (EDU2011-27835).

whether the transmissive methodologies used in Art History matched the interests and cognitive capabilities of the public and whether these methodologies favoured the growth of autonomy when viewing an artwork (Yenawine, 1999; Grodoski, 2016).

They developed a teaching method based on the observation, reflection and analysis of artworks by school groups, achieved via a dialogue between pupils, initiated and moderated by the educator using three questions: *What's going on in this picture? What do you see that makes you say that? What more can we find?* Thus, the role of the VTS educator is not to introduce an overload of content but to facilitate and mediate dialogue (Franco and Unrath, 2014), connecting pupils' ideas and enriching their vocabulary by use of paraphrasing.

The main objective of the method is to use art to learn to look and to think (Burchenal and Grohe, 2007). To this end VTS, which was designed to be applied in the context of both formal and non-formal education, proposes uniting these two learning environments, not via curricular content but curricular competencies. Analysis of an artwork is used to develop students' visual literacy (Hailey, Miller and Yenawine, 2015), their communicative skills, their critical and creative thinking, as well as their capacities for observation, reflection, speculation, developing a line of argument and debate (Ingham, 2001). It is precisely this potential for competencies development which should be one of the essential features for heritage evaluation (Suárez et al. 2013).

The strengths and weaknesses of Visual Thinking Strategies

As well as the enormous theoretical work by VTS's authors and collaborators (Franco and Unrath, 2014; Housen and Yenawine, 2001; Ingham, 2001; Yenawine, 1999), special importance has been given to previous research on the practical application of the method; of great interest when it comes to detecting possible strengths and weaknesses. One of the key points of reference at an international level is the study carried out by Burchenal at the Boston Museum of Fine Arts (Burchenal, 1998).

Even more relevant is the three-year study the same researcher, together with Grohe and the Institute for Learning Innovation, conducted of the Isabella Stewart Gardner Museum programme of educational

activities, Thinking through Art (Adams, Foutz, Luke and Stein, 2007; Burchenal and Grohe, 2007), which was done in various phases, both in the class room and the museum. From the results of this study it can be concluded that the use of the method fosters learning how to look at and understand artworks, as well as skills such as debating, respecting the opinions of others, and connecting and developing an argument with evidence (Burchenal and Grohe, 2007: 112). These aims and conclusions are also to be found in Kisida, Bowen and Greene (2015) as well as Ritchhart (2007) at Project Zero, who also pointed out the fact that constructing learning together as a group makes the process more significant.

While Hailey, Miller and Yenawine (2015) caution that many assessments of the VTS method in the US remain unpublished, it is especially difficult to access Spanish studies of it being put into practice. Despite VTS being used in an ever-growing number of museums in Spain, hardly any relevant studies in pioneering centres have been found, either due to a lack of research or the fact that research has not been published. Even less frequent are voices which assess the method positively. There is one study among the exceptions found that stands out; Proyecto Mira! (1998-2002) (Pou, 2002), which concludes that the application of a method derived from VTS in the classroom leads to an increase of active participation by pupils, an improvement in their communicative abilities and listening, and the raising of confidence in the value of their own opinions.

As for research that emphasises VTS's weaknesses as opposed to it strengths, perhaps the most significant is that by López and Kivatinetz (2006), which analysed the application of the method in some Spanish museums. Many later articles on VTS (Arriaga, 2010; Acaso, 2009) take up their conclusions, and more tangentially those of Hernández (2002), as a basis for corroborating the difficulties of the method. This work prompts us to ask if the practice of VTS in museums in Spain is being carried out correctly, owing to criticism of two questions which they say pupils are asked when looking at an artwork: *What can you see?* and *What else can you see in the picture?* However, according to Housen and Yenawine (2001), the questions asked in VTS to initiate dialogue are formulated differently (see above), and prompt a search for evidence to back up an interpretation, generating a more enriching process.

Another commonly mentioned weakness of VTS talks about a lack of information supplied by educators. In relation to this point, criticisms – shared by López and Kivatinetz (2006) and Arriaga (2010) – are raised by Burnham and Kai-Kee (2011:47). To them should be added reflections by López and Kivatinetz (2006) and Acaso (2009), which state that the method does not introduce components from the sociocultural context, thus losing the artwork's "frame of reference" (Arriaga, 2008). In our opinion it is paradoxical that while criticising the absence of new content, Arriaga (2008) and López and Kivatinetz (2006: 218) maintain that the methodology continues to be transmissive, not in form but in essence, since in their opinion the educator leads the questioning and answering in order to elicit predetermined content.

Museum educators, a forgotten voice

While there are a limited number of studies evaluating the effects of educational programmes in museums (Kisida, Bowen and Greene, 2015), there are even less compiling the opinions of museum educators. There are some publications analysing their work or the training they need but few that pass on their opinions, the fruit of their direct experience with visitors of all ages and circumstances (Carr, 2016).

It is important to note that the terms "museum educator" and «heritage educator» are used only to reference the people tasked with the first-line imparting of educational programmes in our museums and heritage centres and who also adapt these programmes to the needs of individual groups, and that the terms do not include staff from the centres' educational or cultural programming departments.

Amongst the research to which we have had access, articles by Elena Vozmediano (2015) and by López and Alcaide (2011) particularly stand out, allowing us to strengthen our impressions of the role of the educator, as well as work by Tran (2006) and a thesis by Castle (2001), forerunners of this research both in subject and methodology. But, without doubt, there are two previous studies which have been of exceptional influence: the ambitious assessment of museum education programmes carried out by Calaf's team (Suárez, Gutiérrez, Calaf and San Fabián, 2013), from which variations have been introduced designed to give greater centrality to the more overlooked actors: students and museum educators; and that

of Arriaga and Aguirre (2013), which analyse the conceptions of art and the interpretation of educators at Tate Britain, giving greater weight to their voices, as in our case, via semi-structured interviews. Unfortunately, within this already limited sample of work hardly any specific studies have been found dealing with the perceptions of museum educators regarding the implementation of VTS in their respective centres, this being the problem tackled in this article. One exception being the project Thinking through Art (Burchenal and Grohe, 2007; Adams et al. 2007).

Methodology of the study

In this article we present a case study focusing on the use of VTS at the Barcelona Picasso Museum (BPM), chosen because it is currently the only museum in the city to use the method on a regular basis for visits to its galleries with school groups. Since the 2012/2013 academic year, school visits have used the educational method known as VTS. Sessions are an hour long and consist of the viewing of, reflecting on and debating of four artworks. VTS was introduced progressively at the centre, starting in this same academic year. After a transition year, the 2015/2016 year is the third in which VTS has been the sole methodology used for educational visits for the Catalan school public. Thus, with the method established, 2016 was judged ideal for carrying out a study determining the museum educators' perception of VTS.

The study, a qualitative assessment, takes a constructivist approach, using techniques and methodologies common to ethnographical research in education; in this case, semi-structured interviews.

The participants were taken from the staff of educators who regularly work in the museum galleries, and who work for a company which is subcontracted to supply the service. The group of selected educators consists of 6 women and 2 men, ranging in age between 30 and 52 years, all of whom have received training in VTS. This last point was paramount when deciding which educators could provide us with most information, since it was essential they were trained in VTS. All were consulted on the possibility of being part of the study and entered into it voluntarily. We use pseudonyms when mentioning individual educators in this study. When we look at the participants' educational backgrounds, we can sort them into four groups: those who have studied Fine Art; those who have

studied History of Art; a group associated with social sciences (History, Cultural Anthropology); and finally those whose education includes a mix of education and art.

The first two educators are Blanca and Elena. They are part of the usual staff of VTS educators because they trained in the method in official courses. Blanca has spent eight months working as an educator and Elena two months. Within the group of participants, they are the ones with least experience as art educators. The other six experienced the changeover in educational methodology the BPM implemented in its galleries: Albert has spent seven years working as an art educator and Miquel ten. Laura has been working at the museum for eight years and Marina has worked for fifteen years as an educator, while Clara and Eva both have ten years' experience as heritage educators. Thus we have a team of participants with long and well-established careers in the field of art education.

The technique used for obtaining the results of this study was that of a semi-structured interview based on a body of 35 questions grouped into 9 thematic blocks. In some of these blocks support questions had been planned in order to enquire deeper in certain subjects, but in general the interviews took place in a spontaneous manner and questions were added as conservations progressed. The educators were given the opportunity to run through a list of the questions a few days earlier, so that they could familiarise themselves with what was to be asked. They were also allowed to not reply to questions they did not want to answer. They were informed that the interview was expected to last between 75 minutes and 90 minutes, depending on their answers. During the interviews we used the IPhone voice note application for recording, and we took notes on individual comments and observations. We accumulated a total of 8 hours, 43 minutes of recording which was later transcribed.

The field work was carried out during March and April 2016, which coincides with a period of high influx of visitors to the museum. We deemed it relevant to evaluate the educators' perceptions of VTS during a busier period of their annual workload. The interviews were given by one of the authors of this article, a co-worker of the participants who is familiar with the working environment at BPM. This point helped to obtain information in a more agreeable and sincere manner. To create a relaxed atmosphere, each educator was asked to choose a place to be interviewed, with all places being outside the museum.

Once the interviews were transcribed and after being read over several times, the procedure for codifying the strengths and weaknesses of the VTS method was started, using NVivo 11 software. A thematic analysis of the content was carried out starting deductively with the interview questions which pointed us towards major themes; and then codifying inductively specific replies and establishing themes within the question areas. To guarantee the internal validity of the data, the authors codified separately and contrasted said codification, as well as subjecting it to inspection by external researchers. We have also contrasted the data obtained with the participants in order to guarantee its validity. After the categorisation carried out in the initial phase, it was decided to group the codes into broader topics that were more coherent in relationship to each other, while endeavouring to maintain the nuances of the questions. A SWOT chart was compiled to facilitate comprehension of the results in line with similar heritage studies such as the one by Marín and Cuenca (2016). On occasion, each educator gave a different answer which, while providing greater diversity and variation, meant we were unable to establish any tendencies.

With regards to ethical considerations, all the participants freely agreed to take part in the study and for the resulting information to be used for research. Their anonymity was guaranteed at all times, given that they are workers actively employed at the museum and we did not want their opinions to be conditioned by this fact.

Results

Analysis of the content of the interviews has enabled us to determine what the participants consider to be strengths and weaknesses of VTS according to their experience of the method. When expressing the positive aspects they believe VTS to have, they refer mainly to aspects relating to the artwork and the school group. However, with respect to weaknesses, they mainly refer to aspects relating to the educator, the strategies of the actual teaching-learning system, the context, and, once again, the public. In the hierarchy diagram (Fig.1) the weight different strengths and weaknesses expressed by the educators had in the interviews can be seen.

FIGURE 1. Hierarchy diagram of the strengths and weaknesses of VTS.
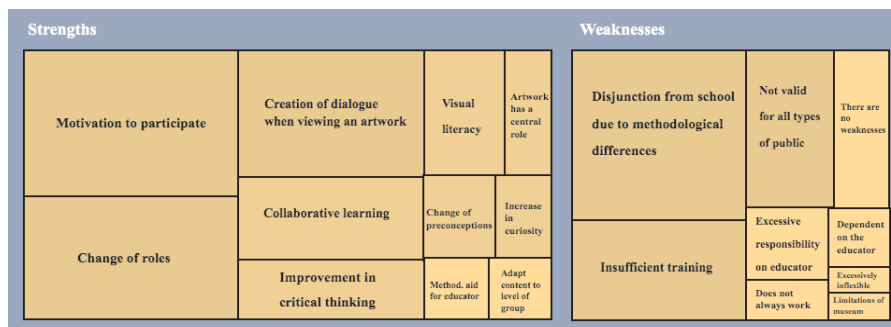
Source: compiled by authors.

As can be seen in the diagram, the most frequent strengths are the change of roles, and motivation to participate, relating to the school group. Aspects involving the artworks are also of importance, such as the creation of dialogue when viewing an artwork, or the improvement of critical thinking arising from viewing an artwork. The perception that VTS promotes collective learning is also significant in the interviews. As for weaknesses, the one that stands out most is the disconnect with the school due to methodological differences, which is related to a lack of content and difficulties in learning the VTS method itself. To a lesser degree, aspects relating to the educators are seen as weaknesses, such as the excessive responsibility the method requires of them, or the insufficient training they may have received. Other less important but still significant weaknesses are the inflexibility of the method and limitations connected with the context of the BPM itself.

Strengths of the VTS method

In general, the positive aspects expressed by the participants are related to the actual strategies of the educational method and how they favour learning on the part of the students.

Related to student group

The majority of educators say the method *motivates active participation* from students who feel they can express their opinions and interpretations of an artwork without being afraid of making a mistake. As an artwork is analysed, observations based on the children's views are accumulated, building the self-esteem of the group and each student in particular. Moreover, the fact that the educator paraphrases each comment made enables the creation of an atmosphere of exchange between peers. We can also say that the method *increases curiosity* and the wish to continue interpreting artworks.

The students, accustomed to listening to educators' explanations, see that the interpretation of the artwork is derived from their comments. A *change in roles* takes place, which was mentioned by almost all the educators as a strength of VTS. Students acquire a more central and active role in the proceedings. The pupils are given a voice and they are asked to think for themselves and share their thoughts. Miquel expressed it as follows: «(…) it gives the viewer a central role, which is not common in museums. The viewer is usually passive, and here the viewer is totally active, right? They take control.» In this sense, Albert commented that for him the method became a *methodological facilitator*, since he could forget about content and focus on motivating observation and reflection on the artwork.

With this "taking control" by the group and the awareness of maintaining a dialogue between all of them regarding the artwork, *collaborative learning* occurs: ideas are added to others, students counter opinions of colleagues and/or stick to their interpretations and go forward together with a reading of the work. The exchange of roles helps teachers to question their own classroom methodology and ask themselves whether enabling spaces for participation and reflection at the school would provide different results from learning. This transformation of the views of teachers is especially focused on students since the educators are often surprised by the reactions of particular children. As Marina says:

«(…) during the experience, well… (you can see) teachers see some students in a different way, and that is very satisfying. (…) The experience piques their curiosity, and sometimes they realise things could be done differently.»

We could say that VTS allows for the discovery of abilities and skills which go unnoticed in the classroom; leading to the *preconceptions* to certain types of school behavior *being gradually changed*.

Related to the artwork

The foremost strength indicated by educators is the *creation of dialogue when viewing an artwork*. Thus, the joint dialogue entered into by everyone becomes the focal point of the methodology. The museum space becomes the ideal place to perform this type of educational activity since it allows us to view an artwork directly, giving the artwork a centrality and causing the debate to flow from observations. Moreover, the dialogue is respectful given that, starting with the educator's initial question, students listen to their peers' contributions and accumulate comments.

It may seem surprising that we talk about an artwork being awarded a *central role* in an art museum as a strength. Indeed some educators point out that with VTS the artwork is re-established as the principle element of the educational activity while in other, more transmissive methodologies, the focus of attention is usually on the content.

By making the artwork the focal point of our artistic educational activity, we are enabling two aspects which the educators highlight as strong points of the method: the contributions to the *development of critical thinking and visual literacy*. With respect to the first aspect, the educator relinquishes the function they commonly have, that of transmitting content, to centre themselves on stimulating critical awareness and critical thinking in students. Closely allied to this aspect we find the positive valuation the participants make of VTS's contribution to *visual literacy* in children; it encourages the construction of meaning by use of the exploration, critique and reflection inherent in VTS, all fundamental competencies for decoding images in today's world. As Eva points out:

> «Yes this, it encourages reflection. Something that I also insist a lot on, concentration. I mean, the first instant of observation, for me, is vital. (…) I think this method makes you stop and take a few minutes in front of a picture. Something which is almost unthinkable in the world we live in today.»

Weaknesses of the VTS method

On analysing the data some weaknesses of VTS methodology have been identified. It is also observed that educators with more years' experience express more weaknesses in the method, while the two participants with least experience did not detect any.

Related to the method and its practice

One of the educators, Laura, told us in her interview that BPM had a previous educational programme based on methodologies closer to those used in schools. The educator, like a school teacher, took the central role in the educational activity and was tasked with transmitting knowledge to students, whose participation was more limited. However, with the adoption of VTS some educators, like her, encountered difficulties owing to its differences from the methodologies used in schools. In her opinion, for VTS to provide significant learning, preview work in the classroom should be done before the visit in order to make sense of the work done in the museum during the activity.

The difference in methodology between the museum and the school is, as we have seen in Laura's example, one of the main weaknesses of applying VTS in the museum according to the study participants. Another point is that although one of VTS's strengths is the active participation of students and their increased reflection, these aspects may be regarded as negative since the children are not used to working this way. Another aspect closely connected to this is what Eva, one of the educators, puts down to an *excessive inflexibility* in the method itself. For her it would be useful to be able to compare an artwork with other artworks or add information at a certain point, and the fact that the discourse stops at the point where the school group has taken it is sometimes too rigid. She says: «It can be spectacular when it works well, but disappointing when it doesn't». *It does not always work* and at times this is due to the methodology and its practice, while at others it is due to the educator not having a good day, or the mood of the student group, for example.

Related to the educator

From the group of results relating to methodology and practice can be derived a series of factors relating to the educator. Our informants often mentioned that the method transferred *excessive responsibility onto the educator*. While it is true that VTS involves the active participation of students, thereby changing the role of the educator, the educator feels they are responsible when it comes to encouraging debate and paraphrasing students' comments in order to jointly construct an interpretation of the artwork. Thus Clara told us:

> «The weakness is that a lot falls upon the educator, a lot of the responsibility for how it works is the educator's and depending on the day you're having, obviously, or if you've done several visits back to back, then you begin to mix up information between one group and another (…)».

This responsibility is closely connected with another negative point detected by the educators, which is that they have the feeling of *lacking training* and resources, which materialises as two important aspects. Firstly, they are not sure how much complementary information they can introduce. Secondly, they feel that while at a theoretical level VTS is precisely set out, clear and established, in practice situations often arise which they do not feel able to deal with. The method is dependent on the reaction of the students, on their observations and interpretations, and that these, at times, can disconcert the educator who is not equipped with guidelines for answering them. Clara, for example, wondered how Philip Yenawine would have reacted in certain situations. She said that, despite having done her training with him and although the theory is very precise, it is not clear on how to resolve certain situations that arise in real life such as: «A child asks you a direct question (…) Obviously, in practice more things happen [than those dealt with in the theory of VTS]». This implies that, with certain weaknesses and negative evaluations the informants end up asserting that these *depend on the educator*.

Related to the students

We have already seen, when discussing the results relating to strengths, the importance of the role of the student in a VTS session. Owing to this aspect, when our informants talk about weaknesses, they suggest that VTS *is not suitable for all students* since the interpretation of the artwork only goes as far as the group is capable of taking it. Thus, visits in which commentary on the artwork is limited to a superficial description may result in a feeling of an interpretive deficiency, but the educator is not at liberty to take the description beyond the point the group has left it. The non-suitability of the method for all types of public is also mentioned by educators of groups which are not accustomed to speaking and expressing opinions, or to feeling that they are being listened to. Solid interpretations are difficult to arrive at since students refuse to express what they can see, a situation commonly observed in groups of adolescents. As Laura concludes:

«I think that VTS needs a group to be prepared in the sense of speaking and listening, so that objectives can be met and they can talk more about the artwork. [As an educator] you can only go as far as the group lets you, and often there are groups which are not willing to go far.»

Related to context

Lastly, it seems worthwhile to bring up a point several educators have made about the *limitations of the actual artworks* in the BPM, given that they mention as a possible weakness in the method some of the paintings in the museum collection. To a certain degree it is a point about the method relying on artworks possessing specific characteristics, which implies a certain limitation on the part of VTS.

Discussion of results

The general results allow this study to be considered as being in step with those by Kisida, Bowen and Greene (2015), Ritchhart (2007), and

those by the Thinking through Art team and the Mira! project. The educators' answers have been set out as a SWOT chart for ease of comprehension and comparison with similar research (table 1).

TABLE 1. SWOT summarising the results of the use of VTS at the BPM.

Strengths	Weaknesses
Motivates participation. Increases curiosity. Fosters respectful dialogue between peers. Change of roles: students create meaning, the educator is a guide. Students given more central role. Method facilitates observation of artwork. Collaborative learning. Change of labels and preconceptions. Creation of dialogue when viewing an artwork. Artwork takes central position in process. Fosters critical thinking. Fosters visual literacy.	The contents are not fixed, they depend on the group. Inflexibility of method. Not always effective due to its methodology. Excessive responsibility lies with educator for conducting method Training, at times insufficient or not applicable. Not suitable for all types of public
Opportunities	**Threats**
Innovative and active educational method in museums (motivating). Methodology underused in classroom: innovation and motivation.	Methodological differences at school: students not used to active methodologies. Expectations of teachers and students. The atmosphere, the mood of the group and the educator affect the satisfactory deployment of the method. Limitations of the museum's artworks. Specifics of the museum space (excess of public, noise, acoustics…).

Source: compiled by authors.

First of all we should point out that the educators we interviewed mentioned more positive points of VTS than negative, and most of their declarations centred on aspects that are intrinsic to the method (strengths and weaknesses). With regards to strengths, and following on from what Franco and Unhart (2014), Burchenal and Grohe (2007), Ritchhart (2007), and Pou (2002) have already established, the educators at the BPM rate positively the *respectful dialogue between peers* and the *collaborative*

learning fostered by the application of VTS at the museum, since it enables children to listen to each other and jointly construct meaning together, favouring the acquisition of competencies essential for the curriculum and real life. The educators also mention as strengths the attainment of several of VTS's goals, such as the skill development of critical thinking and visual literacy, which confirm the results obtained from evaluations of the application of VTS in primary schools included in Hailey, Miller and Yenawine (2015), meeting numerous indicators for the positive evaluation of educational programmes in museums established by Suárez, Gutierrez, Calaf and San Fabián (2013).

It is also of great interest to contrast the strength which almost all the participants in the study mention, the change of roles generated by VTS, with the opinions of leading authors in the field. Thus, while Duke (2010), Pou (2002), and Burchenal (1998) assert that VTS brings about a paradigm shift in which the student introduces ideas and observations while the educator takes on the role of facilitator, Acaso (2009: 111) – following from López and Kitavinetz (2006) – observe that with VTS the educator continues to be central to the teaching-learning process. At the same time, our informants are in agreement with opinions such as the one included in Burchenal (1998) which demonstrates that children are aware of this «taking of control». Thus the results of this research lead to reinforcing the supposition that studies from the more critical sector (Arriaga, 2008, 2010; Acaso, 2009; López and Kivatinetz, 2006, and Hernández, 2002) are centred on interpretations of VTS based, possibly, on a utilisation of the method that may be somewhat unorthodox or outdated. Another point is that although the more central role of students implies a lessening of the educator's role as a transmitter of content, our informants mention that the putting into practice of the method still depends to a large extent on the educator, this being a weakness of VTS.

As for *motivating participation*, the educators coincide with Ritchhart (2007), Burchenal and Grohe (2007), and Pou (2002) when they state that certain strategies of VTS, such as the mediator accepting all opinions as valid as long as they can be justified via observation of the artwork (Ingham, 2011), paraphrasing, and encouraging debate, lead to children feeling more comfortable in museums and wanting to participate more (VUE Understanding the Basics, 2001), as well as generating self-confidence and fostering higher levels of self-esteem in those who do not usually participate in the classroom.

Regarding opportunities, it is interesting to note that the application of the educational method breaks with the traditional dynamic of art education based on purely transmissive strategies, and offers a new opportunity for changing attitudes towards art museums, converting them into spaces open to active participation and reflection. The fact that most of the participants labelled as strong points those points relating to the actual dynamic of VTS, such as motivating participation, enabling a change of roles in the teaching-learning process, creating dialogue when facing an artwork, and generating collaborative learning, is indicative of the need for renovation in the field of museum education that employs strategies involving the students (Grodoski, 2016; Fontal, 2009), another of the opportunities that are presented with the implementation of VTS.

We should also bear in mind that although VTS is based on strategies not frequently used in classrooms (a point which may be considered a weakness of the method), this has an innovative and motivating aspect for the student. It also offers teachers the opportunity to change their perception of their students, allowing them to develop their communicative skills, and connect their theoretical background with their practice as educators (Hailey, Miller and Yenawine, 2015).

However, the advisability of these strategies is questioned by authors such as Burnham and Kai-Kee (2011), and Arriaga (2008), who note as a weakness the encouragement of viewers to talk about what they see and think without offering any information or setting any limits to their interpretation. We agree with López and Kivatinetz (2006: 217) when they remark «(the method) VTS awards more importance to the fact of establishing a dialogue than to the actual contents of said dialogue." Indeed, the data collected here demonstrates it, especially certain reservations held by the educators who have highlighted as a weakness teachers' lack of understanding regarding the non-introduction of content or the non-correction of contributions. This difficulty is related to the methodological diversity of VTS versus schools which, although VTS may provide a degree of extra motivation due to its novelty, may also be a stumbling block for its successful use. Both the point that *teachers do not understand the method*, and their unhappiness that in their view *it does not provide enough information*, repeatedly referred to by our group of participants, have already been mentioned in previous literature (Burchenal and Grohe, 2007); Burnham and Kay-Kee, 2011).

However, it should not be forgotten that –despite many participants saying that context of certain artworks does appear, either via the students' interventions or provided by them when requested by students– the objective of VTS is not to supply contextual information concerning the artwork but to initiate respectful dialogue about the artwork in order to develop the students' cognitive and communicative abilities; to use an artwork to learn to think, not to learn about art. It has been observed that judgements on VTS are often informed by categorical ideas about what artistic education should be (Duke, 2010; Arriaga, 2008), when in reality museum education can be as rich and heterogeneous as the elements that make up our heritage. In any case, despite the numerous strategies aimed at training and informing teachers at BPM having reduced resistance to the application of VTS, results show that there still exists a significant sector that looks to a museum for a continuation of curriculum content and school strategies, when, in our opinion, it would be of more interest to connect the two spheres of learning via the development of competencies.

Conclusions, limitations and lines for future study

As mentioned in the previous section, the results of the interviews with educators at BPM allow us to conclude that the perception they have of the implementation of VTS at their place of work exhibits many more strengths than weaknesses, with the weaknesses being strongly related to the resistance engendered by the new methodologies in adults and adolescents who have received their education in transmissive educational systems.

The research presented here awards a central role to heritage educators and, as we have seen, the results are valuable since it is they who are in continual contact with the reality of education in museum galleries and experience the process first hand. It is important they are considered when conducting research centred on heritage education since they undoubtedly provide further richness to our data, and can assist us in improving art education strategies in museums thanks to their perspective as agents who implement these strategies on a daily basis. If we add to this the scarcity of empirical studies on the application of VTS which was detected during the revision of the literature, making it

difficult to apply solidly grounded criticism to the method, the significance of this study, and those deriving from it in the near future, is evident.

Aside from the potential difficulty of establishing trends owing to the reduced number of educators involved, one of the limitations of this study is that the data is part of ongoing research and that until 2017 there will not be a global perspective available to enrich this data and integrate the voices of all the agents involved via triangulation with observations and questionnaires. The scarcity of empirical studies of the strengths and weaknesses of the method may also have conditioned the discussion of the results obtained.

It is precisely in this point that lines for future study are to be found. This article is the tip of the iceberg of a larger investigation that is expected to shed more and more light on the direction of art and heritage education as we gradually analyse all the data obtained.

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