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Motivational Effects of Technological Resources in Bilingual Education Settings

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Motivational Effects of Technological Resources in Bilingual Education Settings

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Abstract

Neuroscience research shows that motivation is considered to be one of the determining factors for effective learning in any context. In the modern technological era, the motivational effect of the use of technological resources in bilingual settings is an interesting field of research. Considering this assumption, the aim of this study is to analyze whether students are more motivated when learning history and science subjects within the CLIL (Content and Language Integrated Learning) approach if videos are used. This study was conducted on primary school students from third grade to sixth grade. It involved “Ginés de Sepúlveda” and “La Inmaculada” schools in the province of Cordoba in Andalusia, Spain. The sample comprised 85 students. Eclectic research combining a qualitative and a quantitative methodology has been applied in this study. The findings show that the use of videos within the classroom motivates students, by creating a relaxing and comfortable environment in bilingual education settings.

Keywords: motivation, technological resources, videos, CLIL, bilingual education settings

Efectos Motivacionales de los Recursos Tecnológicos en Contextos de Bilingüismo Educativo

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Resumen

La investigación en neurociencia muestra que la motivación se considera uno de los factores determinantes para el aprendizaje efectivo en cualquier contexto. En la era tecnológica moderna, la motivación como resultado del uso de recursos tecnológicos en entornos bilingües es un interesante campo de investigación. Teniendo en cuenta esta premisa, el objetivo de este estudio es analizar si los estudiantes están más motivados en el aprendizaje de las asignaturas de Historia y Ciencia en el enfoque AICLE (Aprendizaje Integrado de Lenguaje y Contenidos) a través del uso de vídeos. Este estudio se ha realizado en los cursos de tercero a cuarto de educación primaria en la provincia de Córdoba (Andalucía), España. La muestra comprendió 85 estudiantes. Se ha aplicado un enfoque ecléctico que combina una metodología cualitativa y una cuantitativa en este estudio. Los resultados muestran que el uso de vídeos dentro del aula motiva a los estudiantes, proporcionando un ambiente relajante y cómodo en entornos bilingües educativos.

Palabras clave: motivación, recursos tecnológicos, vídeos, AICLE, contexto educativo bilingüe

Motivation could be considered as the most problematic and discussed issues in the current educational framework. According to Dörnyei (1994, p. 273), “motivation is one of the main determinants of second language learning achievements”, adding that “the last three decades have seen a considerable amount of research that investigates the nature and the role of motivation in the L2 learning process”.

Similarly, many authors have sought alternative methods to traditional teaching techniques to achieve motivation in L2 students, with Dörnyei (2001) being one of the most relevant. Akram and Malik (2012), Shabiralyani et al. (2015), Mathew and Alidmat (2013), Ismaili (2013), Rocillo (2014), Rodríguez (2013) and Arroio (2010), have focused on the use of video or audio-visual aids in different contexts. However, there are very few studies on the use of video in bilingual education context.

The aim of this study is to analyse whether the use of videos may increase motivation and interest in primary school students within the context of the CLIL methodology in the subjects of history and science, if we consider the use of video as a complement to the subject instead of a fundamental pillar.

Content and Language Integrated Learning (CLIL)

The concept of Content and Language Integrated Learning (henceforth, CLIL) was first conceptualized in 1994 in Europe as an attempt to join language and content together through a foreign language (Guillamón & Renau, 2015). According to Coyle, Marsh and Hood (as cited in Guillamón & Renau, 2015), it could be defined as a “dual-focused educational approach in which an additional language is used for the learning and teaching of both content and language”. Thus, this educational scheme “offers the students not only the possibility of learning the contents of a specific module [...] but also an improvement of language skills with an additional language” (Ioannou-Georgiou & Pavlou, as cited in Guillamón & Renau, 2015).

However, this “additional language” which is used in lessons in order to improve skills is not the learning target in this methodology. On the

contrary, “the language is treated as a functional tool rather than the explicit object of study” (Marsh & Frigols, 2012). Consequently, we may conclude that the CLIL approach is “neither language teaching, nor subject teaching, but rather a fusion of both”. As a result, even though language learning is not the purpose of this approach, teachers must know the vehicular language employed in the lessons, so as to implement CLIL programmes successfully. Both Marsh and Frigols (2012) and Guillamón-Suesta and Renau (2015) support this idea. According to Marsh and Frigols (2012) “all teachers consider themselves to be responsible for language development to a greater or lesser extent, even if the language focus is very, very small indeed”. Therefore, the burden of vehicular language learning also relies on the teachers of content subjects. Furthermore, Guillamón & Renau mention Pavón and Ellison (2015) to stress the necessity of a change in “teacher training” since “traditional methodologies employed by teachers need to be modified and adapted to the innovative CLIL conditions and competences”.

In conclusion, CLIL methods involve a renewal of didactic approaches and a “breaking of boundaries, and changing of the ways in which some subjects are learned as separate disciplines” (Marsh & Frigols, 2012). The CLIL approach is also the result of a combination of four principles known as the 4Cs Framework conceived by Coyle (as cited in Guillamón & Renau, 2015). Thus, a successfully implemented CLIL lesson should combine:

- Content: referring to the auspicious acquisition of knowledge of a content subject.
- Cognition: concerning the mental processes that take place in the integration of both language and concept learning.
- Communication: regarding the use of the vehicular language and its proper establishment in the subject lessons at the hands of the student.
- Culture: considered to be an essential part of the CLIL approach. Students should have knowledge of the culture and history of both languages.

Based on the aforementioned principles, Casal and Moore (2009) and Lasagabaster (2011) identified some specific objectives that must be fulfilled in order to achieve the proper implementation of CLIL methods.

Firstly, Eurydice (cited by Lasagabaster, 2011), classifies the following objectives into four categories (socio-economic, sociocultural, linguistic and educational objectives). The socio-economic objectives refer to preparing pupils for life in a more internationalized society and offering them better job prospects in the labor market. Sociocultural objectives aim to convey values of tolerance and respect vis-à-vis other cultures to pupils through the use of the CLIL target language. The primary aim of linguistic objectives is to enable pupils to develop language skills which emphasize effective communication, motivating pupils to learn languages by using them for real practical purposes. Finally, educational objectives aim is to enable pupils to develop subject-related knowledge and learning ability, stimulating the assimilation of subject matter by means of a different and innovative approach.

Based on the previous classification of Lasagabaster (2011), Casal and Moore (2009) outline a number of specific objectives. Linguistic and educational objectives refer to the learning of some subject content using a language other than the L1 (First Language). To this end, a range of the most widespread languages in the European Union should be encouraged. More specifically, linguistic objectives aim to ensure that the methodology implemented at both at primary and secondary levels is based on communication, interaction by means of language immersion and the balanced development of oral and written skills. From a linguistic point of view, the goal is the development of general skills while simultaneously embracing the L1 as well as the L2 (Second Language), and in the latter stages a L3 (Third Language). This implies not only an increase in partial linguistic competences in different languages, but also the development of a pan-linguistic consciousness. Furthermore, learners will be confronted with different codes which will lead them to reflect upon linguistic behavior. This approach should foster a special development of learners' metacognitive skills and a natural use of languages rather than an explicit knowledge of linguistic codes. Linguistic, educational and socio-economic objectives are those which aim to enable students to manipulate language in relation to different areas and academic content, multiplying the contexts wherein they will be able to efficiently use languages linked to academic and professional fields. More specifically, educational objectives seek to

enable students to manipulate diverse linguistic codes in order to ‘do things’, developing cognitive flexibility towards the analysis and observation of learning processes. Finally, sociocultural objectives are those which aim to expose students in bilingual education to other realities from an early age, allowing them to draw comparisons with their own surroundings and increasing their interest in different cultures with different traditions, customs, institutions and techniques. To conclude, with regards the beneficial results of the implementation of the CLIL programme, Coyle (2006) points out that CLIL methods have the potential for “providing opportunities involving problem-solving, risk-taking, confidence building, communication skills, extending vocabulary, self-expression and spontaneous talk”. These advantageous outcomes may explain why the CLIL methodology has gained so many supporters in Europe and, in particular, in Spain.

It should be noticed however, that for the purpose of the present paper, only one of Marsh and Frigols' reasons for CLIL implementation (2012) will be highlighted, that of, “Increasing learner motivation and building self-confidence towards learning English”. The issue of motivation in CLIL programmes’ will be discussed in due course.

The Video and Its Impact on Motivation in CLIL

Two of the subjects which may cause most anxiety or lack of interest in students in CLIL programmes are history and science. Essentially, this is due to the amount of content involved and to the problems they pose in terms of the comprehension of chronological events or scientific theories and formulas in a language which differs from the mother tongue. In relation to the content taught in science, it is necessary to point out that the areas of "biology, mathematics, Earth's science, physics, astronomy and chemistry" (Linares, 2016, p. 24) are included in only one subject. The content of science subjects should be explained carefully in order to increase students’ confidence and motivation towards learning, in addition to the use of language frames. Therefore, the use of videos, used as a complement to the explanation of content, may lead to very positive results in students. Additionally, Arroio (2010) states that students usually

demonstrate negative attitudes towards scientific subjects. Moreover, Arroio (2010) adds that films or videos are resources capable of motivating students and encouraging them to engage in critical thinking in a scientific context. According to Bellés-Fortuño, B., Ferrer Maestro, J.J. & Benedito Nuez, J. (2013), history is a challenging subject as students have to learn and understand historical facts, social orders, changes in the past and how the past may interfere with the present. Many authors have pointed out that educational methods are a key pillar when considering an increase in students' motivation. According to Anjomshoa, L., Branch, K., Sadighi, F. & Branch, S. (2015), the manner in which the teacher approaches the teaching strategy will have an effect upon motivation. Therefore, they add that an enthusiastic approach is more likely to motivate than a dull approach.

Likewise, Dörnyei (cited in Coyle, 2006) states that classroom strategies which make learning stimulating and enjoyable (for instance, “presenting tasks in a motivating way and building learners' self-esteem and confidence”) are needed to maintain motivation. Similarly, among the most relevant factors involved in motivation, Gardner (2007) highlights the educational context which was connected to the educational methods used in lessons. Several studies have been carried out in order to stress the use of video as an educational method. Ismaili (2013) conducted a study in which the impact of the use of films as an additional resource in both experimental and controlled groups' motivation was analyzed. As a result, she concluded that there are a number of benefits which could arise from the use of films, as opposed to traditional lessons based on reading, such as an improvement in communication skills along with interaction in lessons, among others. According to Ismaili (2013), not only were students more motivated to “see and hear real-life situations than to follow the activities in the graded book” but students' perceptions also changed, they claimed that films provided a more relaxed atmosphere (which, as it was shown in BPNT –Basic Psychological Needs Theory–, may enhance motivation, see “relatedness”). Students from the study also concluded that they were more interested in learning English and in following the lesson carefully. Wolpert (2012) supports the idea that the visualization of films or pictures can help to increase interest and learning levels in students and, thus, can raise

motivation levels. When considering other reasons why video could enhance students' motivation, Rodríguez (2013) highlights that it could be connected to students' spare time. Likewise, Rocillo (2014) suggests that students feel comfortable with its use and the possibilities it could create. Another factor to take into account, is that students have to confront real communicative scenarios, and, consequently, they feel more interested and motivated towards the subject.

Finally, according to Gardner's theory of multiple intelligences, motivation is also enhanced through the development of different intelligences presented in students (as cited in Prieto et al., 2002). Similarly, Prieto et al. (2002) state that considering the strengths of students leads to an opportunity to promote significant learning. Additionally, students will be willing to learn new concepts.

The Use of Video in Bilingual Education

Students in the 21st century interact socially via internet, tools and social networks are used as a natural mean of communication . The students spend more time with audiovisual than with printed resources. Since 1990 YouTube is the most used website. According to (Alwehaibi, 2015), YouTube is an an effective instructional tool for enhancing content learning of EFL college students and should be considered an important teaching resource in classrooms. Another artefact that is gaining consideration as tool for student's learning is emerging mobile technologies. Ma. (2017, p. 183) states that:

“...a new socio-cultural framework is constructed to capture the key components involved in mobile technologies-mediated L2 learning and to describe the dynamism and interaction among the components, involving L2 agency, personalization, tools, knowledge, communications and entertainment. In addition, L2 agency plays an important role in determining how learners employ mobile technologies in mediating and personalizing their language learning”.

Regarding the use of video specifically, Peña and Condon (2014) identify a range of authors who support its use. Thus, Harmer (as cited in Peña & Condon, 2014, p. 157) points out that these videos must be adapted according to the "level and interest of students". This idea is also supported by Bravo (1996, p. 4), stating that the creation of a "teaching strategy" is required since the video alone does not teach by the mere fact of being visualized by the students (Bravo, 1996, p. 4). Therefore, it is the teacher who ensures that "the students understand and retain the content transmitted by the video" (Bravo, 1996, p. 4). Accordingly, and as mentioned by the British Council (as cited in Peña & Condon, 2014, p. 157), there are a number of factors which must be taken into account when selecting the video to be used. Some of these factors are: "language content", "the amount of repetition of the language content", the connection between the language register used in the video with "the language curriculum or the course book", and, finally, "the language level".

Additionally, Peña and Condon (2014) recommend several activities that may be carried out alongside the video, in order that students feel involved and recognize the purpose behind its use. Occasionally, if students cannot clearly identify the aim behind the use of the video, it might become boring for them. For this reason, the use of activities related to the video contributes not only to making lessons more dynamic, but also contributes to create a clear goal which must be fulfilled when viewing it. Some such activities mentioned by Peña and Condon (2014) are the following: firstly, playing the video without sound or playing with sound and covering the picture. Secondly, dividing the class in half, and asking one half to face the screen, while the other half sit with their backs to the screen. Thus, one half must describe the scenes to the other half, enhancing cooperative learning. Thirdly, freezing the picture and asking students to guess what will happen next. It would also be useful at this stage to highlight a number of different types of videos. Peña and Condon (2014) identify a number of different types. They include animation films and cartoons, educational programmes, dramas, TV series or soaps. In contrast, Bravo (1996) outlines a completely different classification with reference to Cebrián (1987) and Schmidt (1987). Based on this conceptualization of the educational video, the following types of videos can be identified:

- Curricular videos, those that "are specifically adapted to the teaching plan of the subject".
- Cultural dissemination videos
- Scientific and technical videos
- Videos for education are those which, without an educational purpose, are used as a "teaching resource".
- Instructive videos, "whose mission is to instruct or achieve the knowledge of a content by the students".
- Cognitive videos, "if those videos try to teach different aspects related to the subject learners are studying".
- Motivational videos
- Modeler videos, "which display a number of models to imitate"
- Ludic or expressive videos, "intended for students to learn and understand the language of audio-visual aids".

Santamaría (2014, p. 8) highlights the distinction between a "teaching resource" and "teaching mean". He supports the idea that a "teaching mean" is "any instrument made with the intention of easing the teaching and learning processes (for example, a textbook or a multimedia program)". Therefore, this term refers to those tools that are used in education which have been expressly designed for this purpose. Furthermore, Santamaría (2014, p. 8) points out that a "teaching resource" "is any instrument that, in a particular educational context, is used for the purpose of teaching or for easing the development of activities (for example, a documentary about volcanoes)".

Monge (2013, p. 22), also offers another definition of the concept of "teaching resource" by citing Gimeno (cited by Monge, 2013), which he defines as any instrument or object that may be used as a resource in order to offer opportunities for learning a concept through its manipulation, observation or reading, or to enable teachers to take part in the development of some teaching function with its use. In light of the distinction between "teaching resource" and "teaching mean" identified above, in the present paper we will consider the use of videos as a "teaching resource".

Functions

The functions of the video may be numerous depending on its uses and, also, the environment where it is included. According to Ferrés (cited in Fandos, 1994), the main functions of the video are the informative function, the motivational function, the expressive function, the evaluative function, the research function, the fun function, and finally, the metalinguistic function. Adame (2009) adds some additional functions of videos to this list including the ability of videos to encourage participation, to generate interest in a topic and to encourage a critical spirit in debates related to the audio-visual information presented. He also identified the ability of videos to develop creativity by allowing the student to practice integrating different learning tools and to avoid exclusively rote learning. Furthermore, he considers that videos assist students to better understand themselves and their environment and increase the effectiveness of teacher explanations. Finally, they may help develop skills and attitudes because they require a global processing of the information they contain. Regarding this last function, it is important to point out that, thanks to the video and its adaptation by the teacher, students are able to learn values in an easier and more accessible way.

On the other hand, Sharma (2016) stresses the importance of the use of audio-visual aids in an educational context and outlines a sequence of beneficial outcomes they could provide in this context (see Fig. 3). In this regard, Sharma states that audio-visual aids may:

- Increase memory retention.
- Improve attention span.
- Create a focal point.
- Facilitate comprehension.
- Organize communication.

However, although the benefits of using videos may be numerous, this study will focus on the “motivational function” as outlined in the previous classification. In this regard, there are a great deal of authors who have

addressed this “motivational function” in their studies, such as Arroio (2010), Bianchi and Ciabattini (2008), Herron, C., York, H., Corrie, C., & Cole, S. P. (2006), Ismaili (2013), Amin (2013), Rocillo (2014), Rodríguez (2013), Wilmot, P., Bramhall, M. & Radley, K. (2012), to name a few. Similarly, Adame (2009, p. 3) states that "audio-visual [aids] may produce an emotional impact which results in positive feelings towards learning, stimulating the attention and receptivity of the student".

Method

General and Specific Objectives

The general aim of the present study is to analyse the influence of the video on the motivation of students of history and science in a bilingual context. This research has been carried out in different bilingual educational centers in which the aforementioned subjects are taught. The specific objects established are:

- To measure student engagement through the use of videos.
- To evaluate students’ attitudes towards learning in non-linguistic areas.
- To analyze students’ motivation toward the study of history and science through the use of video resources.
- To estimate students’ mindfulness and relaxation in the bilingual education context.
- To measure students’ self-confidence in relation to the learning of content in bilingual lessons.

Context and Participants

This research was carried out in bilingual education centers where CLIL programmes were implemented: the public primary school Ginés de Sepúlveda and the semi-private school La Inmaculada in the province of Cordoba, Andalusia, Spain. Those students from the Ginés de Sepúlveda school were in fifth and sixth grade of primary education, whilst those

belonging to La Inmaculada school were in their third and fourth grade of primary education. According to Piaget (cited in Muñoz et al., 2011), these students belong to the concrete operational period, that is to say, from 8 to 11 years old.

Given that we are working in an educational context, the grade groups studied were randomly formed. The number of students belonging to the third, fourth, fifth and sixth grades of primary education were 23, 21, 19 and 22 respectively.

The total sample for this study was comprised of 85 students.

Procedure and Data Gathering

In this analytic research, a quantitative paradigm has been applied. Data collection took place during the first quarter of 2017/2018. The pedagogical treatment is based on two questionnaires divided into three parts:

- Part one: Considering that the purpose of this study is to analyse the use of videos as a complement to the subject rather than as a primary teaching tool, this part is based on three dichotomous yes-no questions regarding the frequency of the use of videos in lessons and their nature (series, films or short videos).
- Part two: Is based on multiple-choice questions. Students had to answer some questions about their perception of history and science subjects.
- Part three: Is based on nine Likert's scale questions. Students had to answer some questions about their usual behavior in lessons while using videos. Likert's scale is a type of scale used to measure the degree of agreement or disagreement of the survey respondent towards a series of questions with an affirmative or negative trend. It is mainly used to know the opinion or experience the user has had towards a certain activity or fact. Thus, in this scale, there will always be a minimum, which corresponds to a full disagreement, a neutral number, and a maximum by which the user surveyed expresses complete agreement with the statement that it arises.

Results and Discussion

In view of the objectives outlined above, the results obtained have been analysed using SPSS software. The results are displayed in the following graphs:

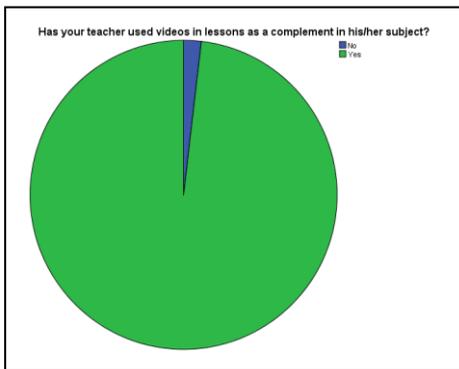


Figure 1. The use of videos in lessons: Ginés de Sepúlveda school

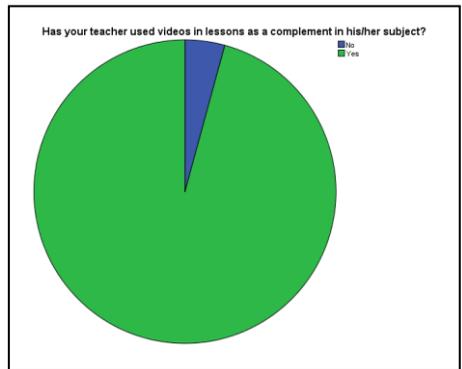


Figure 2. The use of videos in lessons: La Inmaculada school

These charts show that in both schools (Ginés de Sepúlveda and La Inmaculada) videos are used during lessons as a complement to the subject. Thus, both schools promote the use of educational methods which engage students and make learning stimulating (Dörnyei cited in Coyle, 2006). Accordingly, teachers from both schools also promote visual-spatial intelligence through the use of videos, thereby increasing motivation.

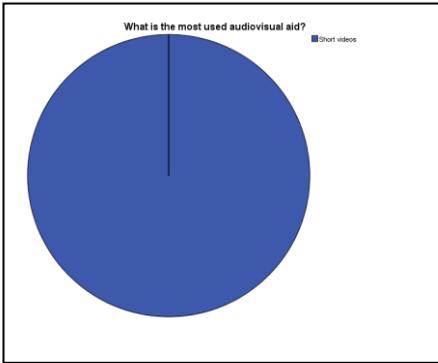


Figure 3. Audio-visual aids used in lessons: Ginés de Sepúlveda school

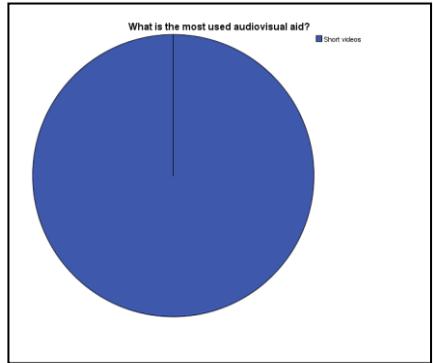


Figure 4. Audio-visual aids used in lessons: La Inmaculada school

Figures 3 and 4 demonstrate that most audio-visual aids used in lessons in both schools are short videos instead of series or films which may take longer to watch. Additionally, series or films require more time for preparation and selection of the content according to the students' age and level of English.

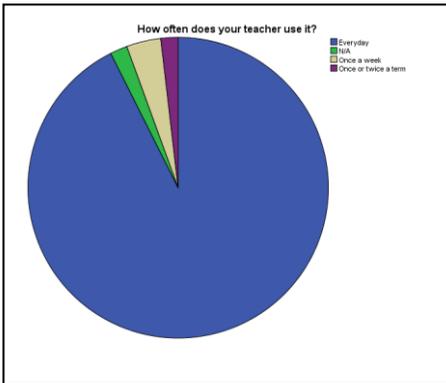


Figure 5. Frequency of the use of videos in lessons: Ginés de Sepúlveda school

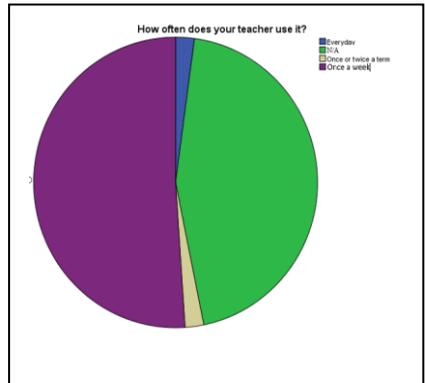


Figure 6. Frequency of the use of videos in lessons: La Inmaculada school

Regarding the frequency of the use of videos in lessons, figure 6 shows that in the fifth and sixth grades of primary education, videos are used every day. In contrast, in La Inmaculada, videos are used once a week most of the time. Time constraints or even the perceptions of teachers towards videos in lessons may partly explain this result. This frequency should depend on the levels of anxiety in students and the comprehension of the content, among others.

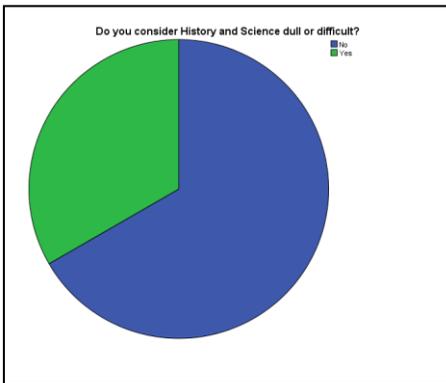


Figure 7. Perception of history and science subjects: Ginés de Sepúlveda school

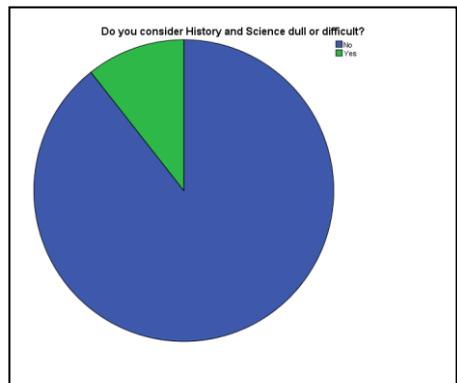


Figure 8. Perception of history and science subjects: La Inmaculada school

In relation to students' difficulties with history and science subjects, for some fifth and sixth grade primary school students, history and science may be quite difficult or dull. However, in both schools and grade groups most students do not consider these subjects as being challenging.

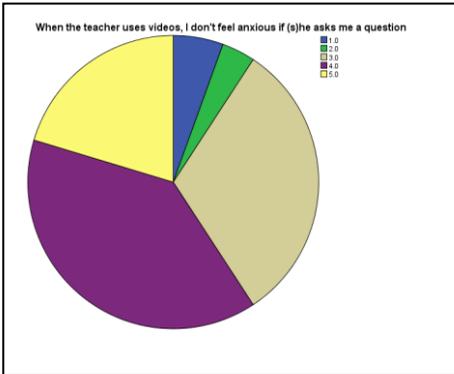


Figure 9. Anxiety during lessons when using videos: Ginés de Sepúlveda school

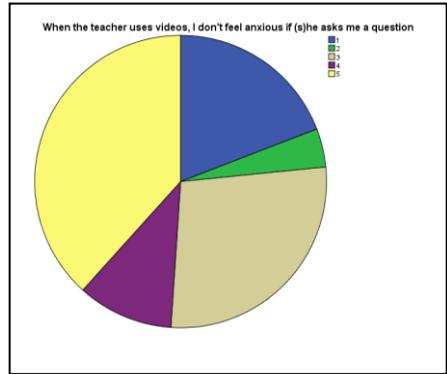


Figure 10. Anxiety during lessons when using videos: La Inmaculada school

According to figures 9 and 10, going from 1 (very anxious) to 5 (not anxious), most students in both schools and grade groups do not feel anxious if the teacher asks any questions while watching videos. However, there are some students in La Inmaculada (third and fourth grades) who disagree with this statement. Thus, we must take into consideration the variables proposed previously.

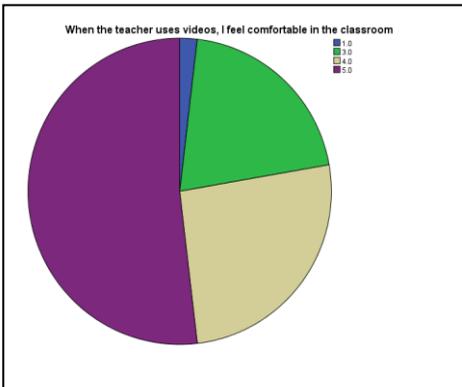


Figure 11. Comfort of students in classroom: Ginés de Sepúlveda school

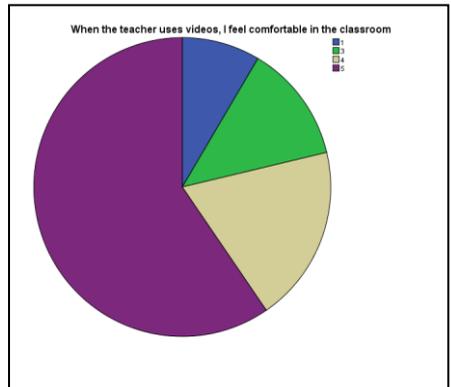


Figure 12. Comfort of students in classroom: La Inmaculada school

Figures 11 and 12, going from 1 (not comfortable) to 5 (very comfortable), show up that most students in both schools and grade groups feel comfortable in the classroom when videos are used during lessons. The students' comfort level during lessons is inversely proportional to the anxiety they may experience. Accordingly, the students' comfort level during lessons is a determining factor for increasing motivation.

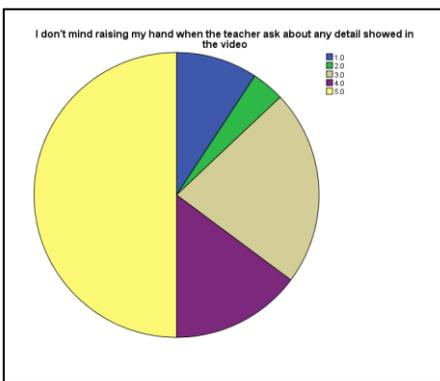


Figure 13. Participation of students: Ginés de Sepúlveda school

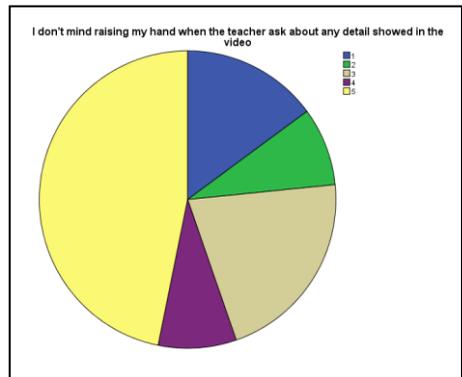


Figure 14. Participation of students: La Inmaculada school

Regarding the participation of students in lessons where videos are used, which is related to the students' comfort in the classroom, figures 13 and 14 show that the majority of primary school students from third to sixth grade usually participate and answer questions related to the videos. These findings are related to the need for self-confidence in students as one of the "requirements for stimulating learning" and one of the elements of intrinsic motivation (Keller, cited in Rudhumbnu, 2014, p. 89).

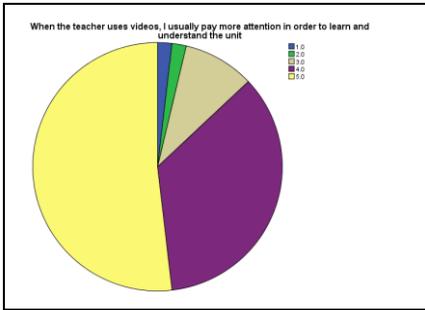


Figure 15. Determination of students to understand and learn: Ginés de Sepúlveda school

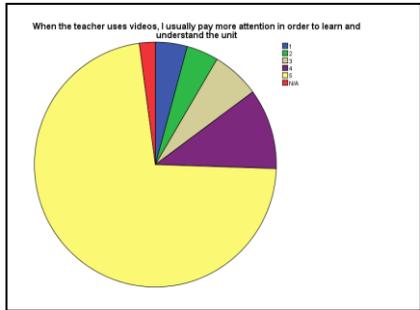


Figure 16. Determination of students to understand and learn: La Inmaculada school

Figures 15 and 16 show up that in both schools and grade groups the majority of students pay more attention to videos in order to understand and learn the concepts of the subjects. These findings are very important for students’ learning process and for students’ motivation, since they show that, in both schools, students understand and are aware of the purpose of watching videos: learning. Additionally, as videos require students to pay attention, by nature they require students’ concentration. According to Keller (cited in Rudhumbnu, 2014, p. 89), this is a “requirement for stimulating learning” in intrinsic motivation.

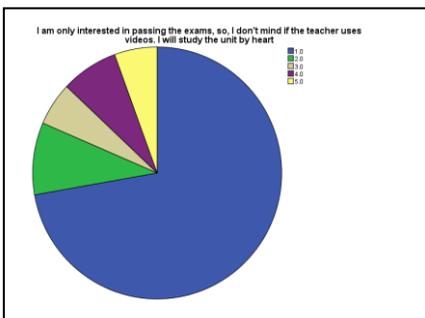


Figure 17. Determination of students while using videos: Ginés de Sepúlveda school

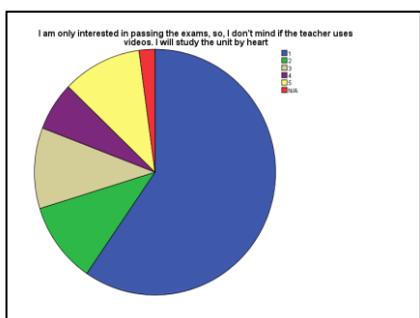


Figure 18. Determination of students while using videos: La Inmaculada school

Figures 17 and 18 demonstrate that most primary school students from third to sixth grade want to understand and learn through the use of videos as opposed to studying the concepts using the traditional method. These findings mean that students are interested in the subject, and, as highlighted previously, this interest has a direct impact on motivation. In other words, the desire to learn concepts related to the subject, and, especially, the desire to understand them, is connected to intrinsic motivation.

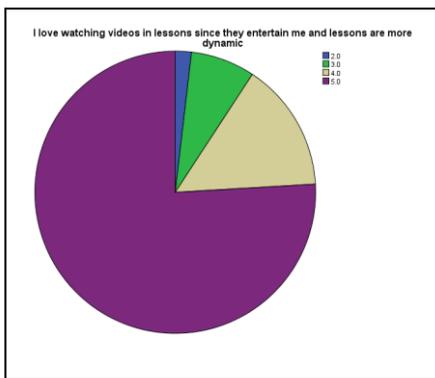


Figure 19. Students' perception of videos: Ginés de Sepúlveda school

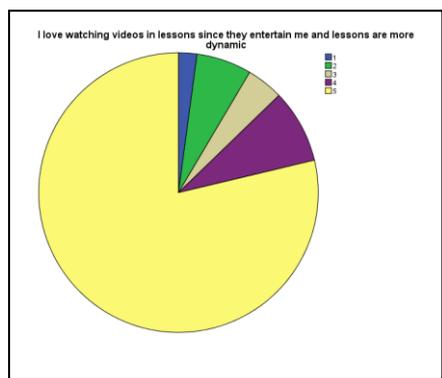


Figure 20. Students' perception of videos: La Inmaculada school

Figures 19 and 20 show students' perception towards videos in terms of entertainment and as a change from traditional lessons. Thus, most of the students, not only third and fourth grade primary students, but also fifth and sixth grade students, are interested in the use of videos. One of the main reasons for these findings could be the fact that videos are connected to students' spare time (Rodríguez, 2013). Additionally, one of the functions of videos identified by Ferrés (cited in Fandos, 1994) is the fun function, which has the effect of creating a sense of satisfaction among students, which in turn leads to motivation.

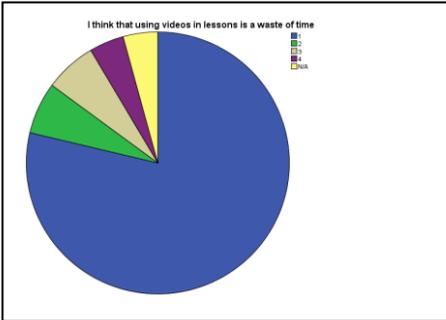


Figure 21. Perception of students towards the use of videos: Ginés de Sepúlveda school

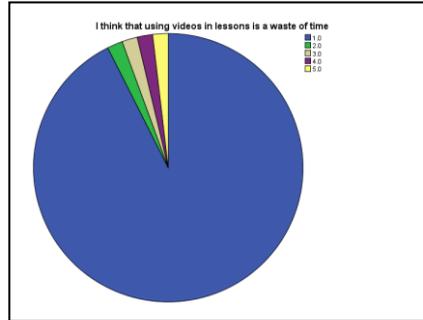


Figure 22. Perception of students towards the use of videos: La Inmaculada school

As can be observed in figures 21 and 22, the majority of primary school students from third to sixth grade do not consider the use of videos as a waste of time. These findings are correlated to those in figures 17 and 18, in which the need for attracting the attention of students is very important in intrinsic motivation. Additionally, making students aware of the objective of the videos changes their perception towards them and towards the subject.

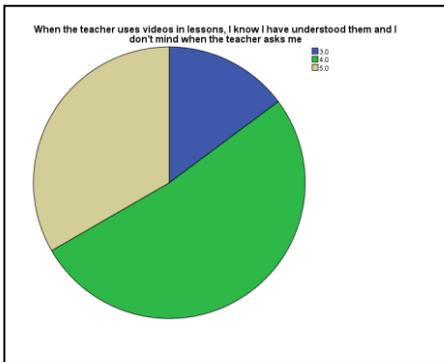


Figure 23. Behaviour of students when using videos: Ginés de Sepúlveda school

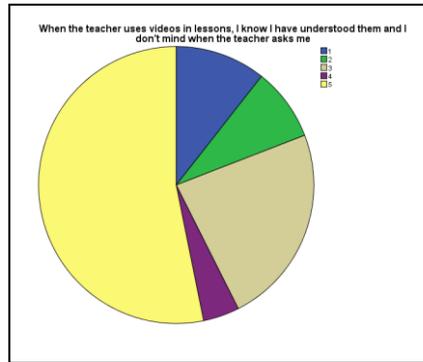


Figure 24. Behaviour of students when using videos: La Inmaculada school

Figures 23 and 24 show that most primary school students from third to sixth grade focus on the video which is played during lessons instead of starting to talk with their classmates. These findings are related to those in figures 13, 14, 21 and 22. Capturing and maintaining students' attention is an important step towards intrinsic motivation. For this reason, it is important to consider students' behavior and attention during the visualization of videos.

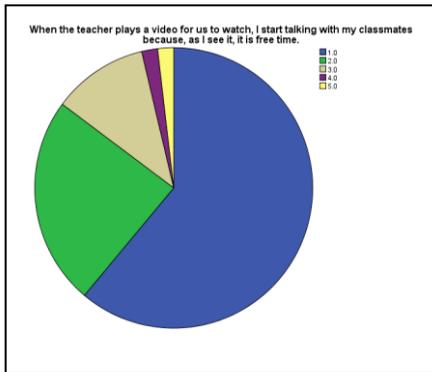


Figure 25. Confidence of students when using videos: Ginés de Sepúlveda school

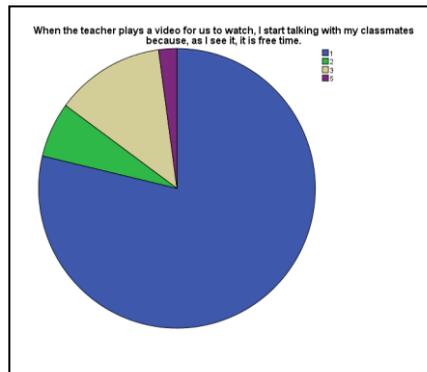


Figure 26. Confidence of students when using videos: La Inmaculada school

Figures 25 and 26 show that the majority of students surveyed are confident that they have understood and learned from what has been shown in the video. These findings are also related to those in figures 15 and 16, namely that self-confidence is the key to increasing intrinsic motivation in students, and, consequently, to facilitating the learning of both content and language. However, in La Inmaculada School, although the vast majority agrees with the students from Ginés de Sepúlveda, there are certain students who either have not fully understood the concept shown, or who have not understood anything explained in the video. For this reason, it is necessary to consider the variables mentioned above in relation to the students. It is also important to take into account the fact that the results of students from La Inmaculada (third and fourth grade primary school students) are very similar to those from Ginés de Sepúlveda (fifth and sixth grades). However,

they do differ on occasions, for example, when considering the frequency in which videos are used. Regarding the theory that history and science may be difficult or dull for students, as has been demonstrated by the results, students do not see these subjects as tough or difficult. One of the reasons why this is the case is, likely to be, due to the methodology used in these two schools: Ginés de Sepúlveda and La Inmaculada. Additionally, in both schools the use of videos is strongly encouraged, thereby making these two subjects easier as a result. With regards the objective of measuring the students' positive engagement through the use of videos, we can conclude, with reference to figures 25, 19 and 20, that students consider videos as entertaining. Thus, students feel more motivated when videos are used.

In relation to the objective of evaluating students' attitude towards learning in non-linguistic subject areas, the results shown in figures 15 and 16, 17 and 18 reveal that most students agree with this statement. As a result, this interest implies a positive attitude and motivation on the part of students when learning history and science. With regards the objective of estimating students' mindfulness and relaxation in the bilingual education context, the results presented in figures 11 and 12 show that videos may reduce anxiety and stress derived from factors such as the non-understanding of concepts or the relationship between student and teacher during lessons, with the result being that students feel more relaxed. Mindfulness involves maintaining an awareness of our thoughts and feelings, students learning through the use of videos pay attention to the present moment and learn the concepts presented to them. Finally, regarding the objective of measuring students' self-confidence in relation to content learning in bilingual lessons through the use of videos, students agree with the statement, as displayed in the results presented in figures 9, 10, 13, 14, 25 and 26. Thus, as was highlighted in the theoretical background, self-confidence is strongly linked to motivation in learners. Therefore, we may conclude that the use of videos is highly recommended if teachers want to motivate their students and improve their self-confidence. Finally, it is important to point out that the primary purpose of using videos during lessons, as has been displayed in the results, is that of illustrating concepts that the students may not have understood. Therefore,

this result reinforces the idea that the use of videos is a complement to and tool for the subject.

Conclusions

In view of the results obtained and the literature reviewed in this study, we can conclude that videos are well-received by teachers as a teaching complement in history and science subjects with the purpose of reinforcing concepts in order to aid understanding. We conclude that the use of video is capable of increasing students' interest in the subject and in aiding learning, both of which are important factors in determining motivation. This finding was also underlined by Bravo, E., Amante, B., Simo, P., Enache, M. & Fernandez, V. (2011) in their study about the impact of videos and ICTs (Information and Communication Technologies) on students' motivation. Similarly, as a direct consequence of motivation, it has been proven that learners are able to have fun in history and science lessons thanks to the use of videos. Additionally, the use of videos increases students' self-confidence with regards the knowledge they have learned about a topic. This characteristic is also pointed out by Gardner (2007) when considering the external factors linked to motivation.

Consequently, we can conclude that all of these factors (motivation, interest and self-confidence) create a relaxed and comfortable environment where students can study and work, a finding that Ismaili (2013) also identified in a study on the benefits of using movies in EFL (English as a Foreign Language) classrooms. Using videos in non-linguistic areas, such as history and science, provides students with a mindfulness experience that allows them to be attentive and to understand concepts and ideas in the L2. Video resources also provide a means of interactive instruction; this reduces anxiety levels in students and the corresponding negative consequences of anxiety on learning. In light of the results obtained in this study, we argue that the use of videos has motivational and beneficial effects on the comprehension, interest and learning of history and science subjects.

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