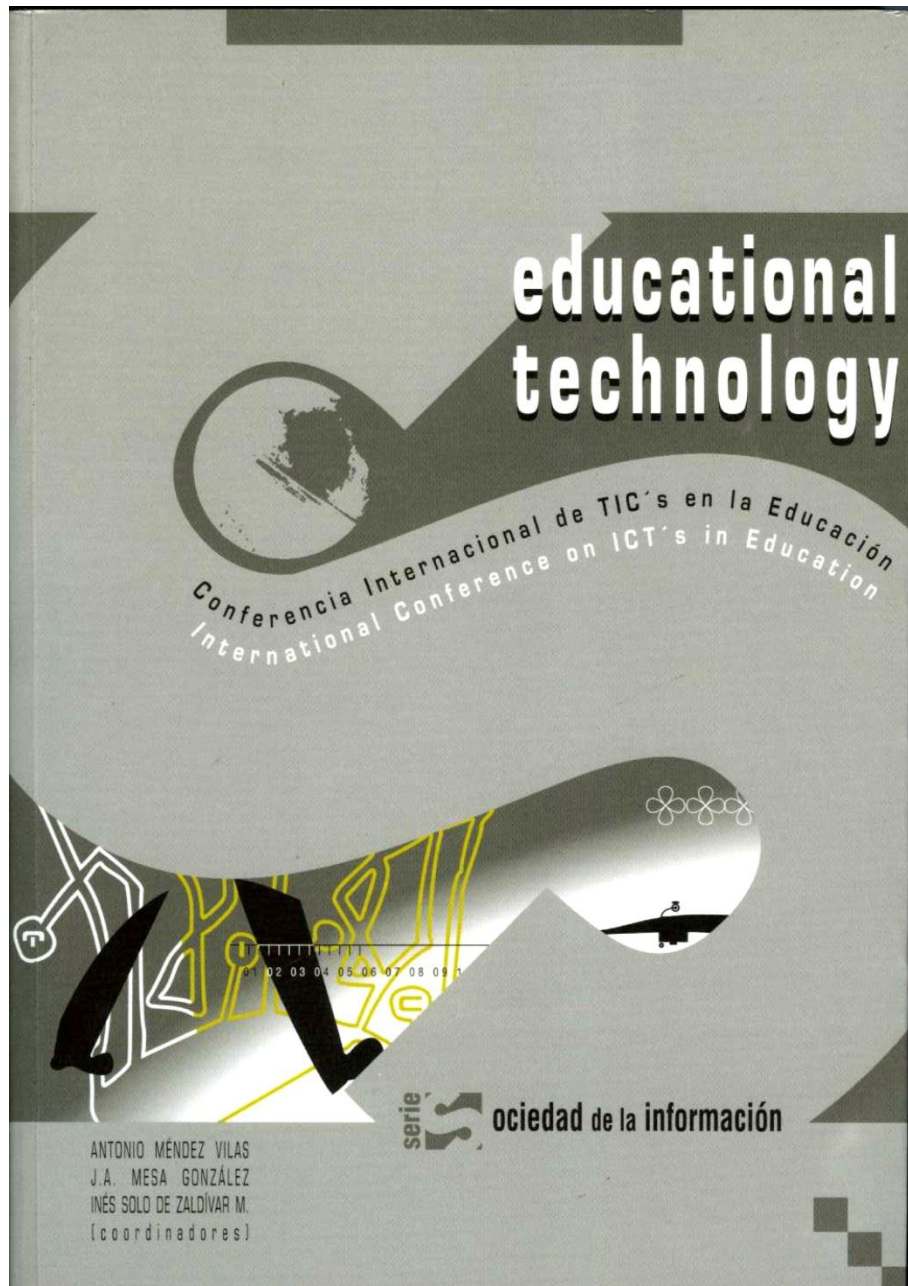


Caldas, José & SILVA, Bento (2002). The Video Technology in Communication Interaction and Learning. In Antonio Vilas, José González & Inés Zaldívar (cords.). *Educational Technology: International Conference on ICT's in Education*, tomo II. Badajoz: Junta de Extremadura, pp. 1010-1014. (ISBN: 84-95251-78-7).



THE VIDEO TECHNOLOGY IN COMMUNICATION INTERACTION AND LEARNING

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We have carried out a research work on the using of video technology in the classroom context and its effects on the communicative interaction, learning and expressiveness and, too, its effects as an instrument of *Education for the Media*. The video modalities used, that assumed the shape of a teaching/learning strategy in the classroom, were: the video-lesson and the video production.

The research methodology used fits in the ambit of the *development methodologies* and it was applied to 10th grade students.

The research results point out to an increase of the interaction in the classroom, the contents learning, the practice of autonomy and investigation processes, the pleasure of learning and participating and the expressiveness on the students' side, as a result of video's usage. We have noticed, equally, a positive attitude towards the *media*, so that using the video as a teaching/learning strategy is a way of contributing to the *Education for the Media*.

1. Study intentions

Using as a reference the researches made about video effects on learning that have shown the necessity of using constructive learning strategies (Cabero, 1989; Valmont, 1994; Westberg & Jason, 1994; Wetzel, Radtke e Stern, 1994; Alonso, 1995; Ferrés, 1995; Silva, 1998; Herrel & Fowler, 1998; Bartolomé, 1999) and the investigators experience on using video in classroom context, that has been ruled by activities that promote students autonomy in their knowledge building, it were defined the following research intentions:

- A- Evaluate different modalities of using video technology and its implications on communicative interactions in classroom.
- B- Identify the video's role on promoting learning.
- C- Evaluate the importance of video as a stimulating element of students expressiveness.
- D- Identify communicative variables proportioned by video's usage.
- E- Verify the importance of using video in teaching/learning situations as an instrument of *education for the media*.

2. Methodology

It was drawn a research to take place in a natural context (teacher, contents, strategies, space and students do not change with the investigation) and where every researcher is already a constant presence in classroom. The research methodology used fits in the ambit of the *development methodologies* (Van der Akken, 2000).

Due to the diversity of the dimensions in analysis- learning, interaction, expressiveness and students' attitude towards video- we used instruments and ways of collecting data equally diverse. We used the following means of data collecting:

1. Inventory questionnaire on the video's usage by the students.
2. Students' knowledge evaluation tests under the shape of pre-test and post-test for A and B strategies.
3. Identification questionnaire of students' opinions facing the four video strategies used.

4. Identification questionnaire of students' attitudes towards the video's usage in CTV subject lessons.
5. Participant observation.
6. Analysis of the materials produced by students: registration tables, texts, videos and television broadcasting.

3. Modalities of video's usage

Trying to experiment and evaluate different modalities of using video, we have outlined four strategies with different implications within the work's organisation and on students' participation:

- Strategy A- Watching a document, *Video-lesson*, Ferrés.
- Strategy B- Construction of a commentary for a video.
- Strategy C- Planning and accomplishment of a video document.
- Strategy D- Planning, accomplishment and broadcasting of a programme of 'school television'.

Next, we will introduce the essential components of each strategy.

Strategy A- Video-lesson. We used video documents built by assemblage after television documentaries. The location and sound effects have suffered some adjustments according to the objectives and contents of learning. The documents' duration varied from 4 to 11 minutes. To support learning, students had registration tables that they filled in individually, after watching the video document. After discussing in small groups and/or in class, students corrected and completed their registrations. Whenever necessary, the video document was watched by a second time so that students could confirm and complete, once again, their registrations.

The duration of the video documents used was determinant so that the whole strategy could be developed in the same lesson. Lessons had 50 and 110 minutes. There was a lot of concern in order to prevent the teacher from being the transmitter of information and, instead, making him particularly active in stimulating students to participate and observe the class dynamics. All the information was, therefore, transmitted by the video document. To control the learning process, we applied a knowledge test under the shape of pre-test and post-test on each theme.

Strategy B- Sequence of images built after television documentaries, but with no soundtrack. The theme was the *Origin and Formation of the Earth*. The video document lasted four minutes.

After a brief elucidation about the strategy to develop in class, students began by watching the document. In group, and using some information from the students' book, they created a text for the images, with the support of the video's script. The text made by each group was recorded by the students and set up with the images.

The duration of the film was determinant to control the necessary time for the strategy and so that it could be possible for the students to retain the essential ideas from the images. The script given was also essential for this task. After recording the discourse, one of the documents was watched by all the students. To control the learning process, we applied a knowledge test under the shape of pre-test and post-test.

Strategy C- Construction of a video document about the theme *Origin of Life*. After studying the subject, students, divided in 5 groups, planned and built the document.

The filming was made autonomously by the students. The setting was made in school with domestic equipments and with technical support. The selection of the images' sequence and the sonorosity was of the total responsibility of students.

Strategy D- Television broadcast. A television programme was drawn, built with two parts. On the first part, each group presented, live and under the shape of an interview, its document, that was broadcasted afterwards. On the second part, two students interviewed, also live, two teachers invited, with questions related to the theme *Origin of Life*. The broadcast lasted 60 minutes and it was broadcasted to the school auditorium.

Students assumed the different roles necessary to the broadcast: 2 interviewers, 1 director, 1 director assistant, 3 cameramen, and all of them were interviewed during the presentation of their documents.

We have to emphasize the fact that the broadcast was completely live, which created on the entire group a great sense of commitment and responsibility.

4. Conclusions and discussion

The interpretation of the collected information suggest us two groups of conclusions. One has to do with the intentions defined for the investigation. The other group of conclusions has to do with the curricular implications of using the video technology.

4.1. *Effects on learning*

We have verified that there was, definitely, learning of contents by using the video and that that learning brought huge benefits to all students, since there was a greater homogenisation and a smaller amplitude among the results and less values of standard deviation and variance on the post-tests rather than on the pre-tests.

The effects on learning have also been verified on the level of study processes, as autonomy, attention, team work, planning, organisation, research, information selection, synthesis capacity and effort.

The processes of video production allowed students to widen the application camp of their knowledge, involving community and using varied codes of expression.

4.2. *Effects on interaction*

On video-lesson, strategy A, video works as the beginner of a process of analysis and reflexion joined together, creating important moments of interaction between students and between students and teacher¹.

¹ Using a video document shades off the differences of power between teacher and students, since the teacher is no longer seen by students as the only detainer and transmitter of knowledge. This role is, now, taken by the video document that students watch, in an equal way, accessible both to them and to the teacher (Silva, 1998). On the research made, it was possible to verify that, after having some experience on the video documents analysis, the class-group became able to make an autonomy learning work after watching a video document.

The video production promotes interaction between students, quite clear in group work and in the relationships with the community. It also promotes the creation of learning environments characterised by some informality, making the interactions between students and between students and teacher quite easy. These environments also encourage affection and emotion, making of learning a life experience. Video ends up having a function of making students less inhibited (Silva, 1998), increasing their levels of confidence and encouraging their participation. With video, '*the student mobilizes and exteriorizes more easily his cognitive repertoire acquired with the most varied experiences*' (*id.*, 1998:390).

4.3. *Effects on expressiveness*

Using video documents, strategy A, by the diversity of complementary activities that it can unchain, makes the development of students' expression abilities very easy.

The production of a text to video, strategy B, promotes students' expressive abilities, either on writing or on speaking, once that students had to build a text and had to read and integrate it in the video document.

On videograms production, students use different expressive elements, images, sounds and different ways of narration and syntax.

Video, in summary, has effects both on the level of expressive richness, by the diversity of codes and means that students use, and on the level of constructing the message and the communicative acts, by the rules, demands and preparation that it requires.

4.4. *Effects on the Education for the Media*

Students had already had, in the beginning of the investigation, a remarkable experience of contact with the audiovisual language, created, mainly, due to watching television, but also due to using video equipments. Also on the level of educational usage of video in the classroom, students have already shown some experience. This initial situation was essential for the research, once that it improved the understanding of messages transmitted by the video codes, having students shown a very positive attitude towards both to the mean itself and to its didactic usage.

Students dealt very well with the activities of video production, exhibiting a great range of sensitivity towards the quality of their documents. This was very clear on each of the three production strategies.

Students showed a very good appropriation of their roles, either technic, related to the handling of the video equipments, or communicative, related to the television presentation and to the interviewing.

With the real work of being in contact with video, students ended up pondering about the social utilisation of *media* and adopting a more critical attitude towards its messages.

4.5. *Effects interaction*

As we had the opportunity to refer, we are convinced that each one of the video strategies used is capable of considering all the multiple effects in analysis, but with a distinct value for each one of them. Students' opinions allow us to take a very important conclusion: by using video, teacher must be attentive to the effects that the chosen modality creates and that these must be intimately connected to its curricular project.

4.6. *Curricular implications*

Besides making a more or less direct reading of the results, that we have just done, this study guide us to other analysis, as a consequence of the systemic slope of Educational Technology.

4.6.1. *Methodology validation*

The application of the four video modalities, as didactic projects of practical application, allows us to take two conclusions of methodological nature: the first one has to do with the confirmation of the pedagogical validity of *video-lesson* methodology. All the complementary activities that surrounded the act of watching the video document² were particularly important, since they allowed a greater appropriation of contents and made the students' participation a lot more easy. The second conclusion has to do with the feasibility of the strategies concentrated on the video technology in the classroom context. It was possible to conciliate lessons with complex video strategies, like the video production and the preparation of a television programme broadcast, and, at the same time, to favour extremely valid learning situations, where students clearly show a great involvement and enthusiasm.

4.6.2. *The video as a democratising factor in teaching*

The democratising effect of video, seen here as favouring the access to Education equally by all, besides its social-educational characteristics, is clearly shown by the following levels:

- a) on a level of contents learning, which is demonstrated by the positive homogeneity of the results in the post-tests of knowledge;
- b) on a level of access to information, by making contextualised knowledge very easy, in a recognisable and accessible code to all students;
- c) on a level of access to technology, because school offers equipments that do not exist on students' everyday life, at least for some;
- d) on a level of communication, making it possible for students, usually considered merely receivers of communicative phenomena³, to be transmitters as well: as real creators of audiovisual messages;
- e) on a level of the neutralization of the differences between teacher and students. The audiovisual makes possible a moment of equal communication between students and teacher;
- f) on a level of a critical usage of the *media*. If using video at school is promoting an *Education for the Media*, then we are developing in students, mainly in those who are more ill-favoured socially, a qualitatively better ability of receiving the information conveyed by them.

[2. *Using the registration instruments, tables, the blackboard or the notebook, in association with moments of discussion and organised analysis.*

3. *We bear in mind television, as the most important centre of students' communicative interest.]*

4.6.3. *Organisational implications*

The room conditions, the equipments availability and the technical and pedagogical support needed to use video, in its different modalities, are decisive factors on the feasibility of any didactic project through video. Even the most simple project, as watching a video document, demands the gathering of some technical and pedagogical conditions so that educational efficacy can be accomplished.

4.7. *The school – also a place of pleasure*

Using video in classroom pleased the students very much, who considered it to be a very interesting way of learning. Students showed great interest on the equipments, considering them very easy to handle and having great pleasure by using them. Students associate pleasure to using the video, particularly in the production activities, which makes necessary to put students playing the role of producers of audiovisual messages and, then, establishing the bridge between the emotional and the rational, developing, at the same time, a critical spirit towards this kind of messages.

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