

THE ROLE OF DRAWING IN THE INTUITIVE LEARNING OF THE RELATIONSHIP BETWEEN SOUND AND IMAGE

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Abstract

In order to establish a connection between sound and moving image, common forms of connection and interpretation must be found. By regarding sound as a sequence of objects and moving image as a sequence of planes, a bridge is created, in which drawing is used as a rhythmic interpreter of variations in sound intensity. Accordingly, in the video editing process, drawing is used as a staff for the rhythmic succession of images. This experiment is conducted in the setting of bLearning (Blended Learning). In the experimental setting of the research project at hand, a cycle of reading, expression and construction is created within a teaching/learning module. This cycle involves intuitive listening, representation of sound, and editing of a video. We tested a hypothesis for application of this cycle, in the teaching/learning module. In this module, which is concerned with the areas of moving image and sound, we made use of parallels between the sound component and visual representation, in the same way as in Murray Schafer's descriptions of sound objects in his book – *El Nuevo Paisaje Sonoro*. These parallels are fundamental to the creation of a bridge between sound and moving image. The act of drawing establishes a relationship between the two elements, decoding the audio signal as a visual one. Graphic expression of music leads to improved musical perception, influencing future musical constructions with regard to rhythm and intensity (MARTIN, 2006; TAN, KELLY, 2004).

To this end, as part of our research we created an experimental exercise comprising several phases, for testing in the classroom setting. The first phase consisted in listening to a sound sequence, followed by expressive drawing of the rhythmic elements perceived, concluding with use of a video editing tool to create short video sequences (Illustration 1).

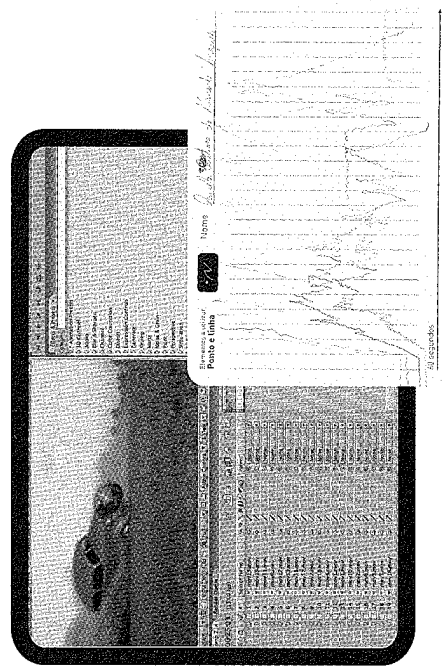


Illustration 1: Drawing translation using the assembly tool Adobe After Effects.

In these sequences, learners used duration values for the sequences based on the values found in the drawing (Illustration 2).

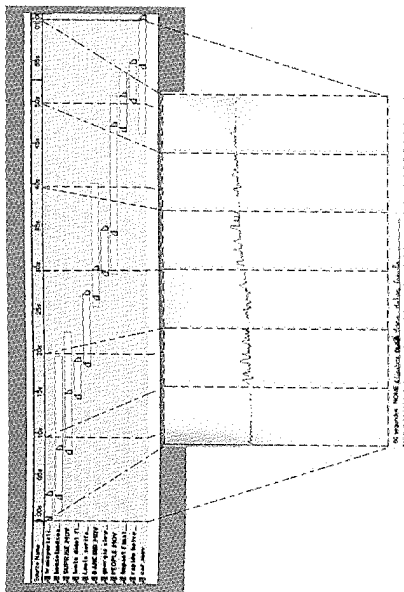


Illustration 2: Variable method translation using the graphic score.

The cycle used in the experiment has a symbolic value within the learning path. In this experiment, drawing is used as a form of cryptic communication, as the scribbles of each learner are personal and intuitive interpretations of the musical piece (Illustration 2). The moments of greater intensity are then used to provide access to a range of relationships between sound and image.

The graphic expression of sound can be explored in the construction of rhythms, in the editing of a musical video. The graphic representation of the musical piece can establish markers with regard to the intensity and rhythm of the video sequences used in the video montage. This results in a hypothesis of application and combination of various forms of language, with the aim of enriching experimental knowledge applied to the digital video teaching field, with or without an interactive component. This study focuses on a particular situation in which the intuitive variables contained in the sketches are applied to a metric system such as video editing, though other potential applications are possible, not just in this symbolic cycle, but also in others in teaching/learning modules of a similar nature. In these learning paths, elements of perception may be combined, first in an intuitive descriptive system and subsequently in an application making use of a metric system. Drawing, as a unifying element, provides clues to the connections between thought and drawing, as well as the development of thought and meaning, by showing information in units, and as belonging to a whole (BROOKS, 2003). In this study, drawing plays a part which is, on the symbolic plane, connected to the creation of new concepts of interaction among apparently separate areas of knowledge: sound and image.

In the teaching module tested, drawing is presented as a measuring tool; the existence of relationships with the construction of thought is explored, visible by means of the study of processes of production of meaning.

The implicit structure of the experimental model refers to the organisation of content, and is a structure which corresponds to learning design, visible only to the teacher, in which memory referencing is used, adopting a sequential paradigm in accordance with the

D.E.S. (Dramaturgical e-Learning Strategy) method (THISSEN, 2002). The dramaturgical strategy applied to eLearning is a way of presenting and organising information – the reasoning follows a continuum, from emotion to cognition (Illustration 3). The explicit structure used is based on bLearning (online and face-to-face learning), is visible to the learner and contains the sequence of content and learning tasks, offering, in the online setting, communication tools (discussion forum).

The experimental learning strategy, by making use of the cycle (listening, drawing and editing) as an exercise, enabled the creation of a symbolic element, detached from and unifying intuitive listening (the appropriation of rhythmic elements without recourse to a system of measurement). The exercise made use of drawing (in creating a rhythmic record) and extrapolation of that record into video editing

(juxtaposition of videographic scenes). This led to better results compared to a traditional model, based on a linear sequential strategy, without symbolic points of reference. The results of this study indicate how the listening exercise is of use, in future studies of the intuitive relationships between the perception of rhythm and image, whether drawing or video editing.

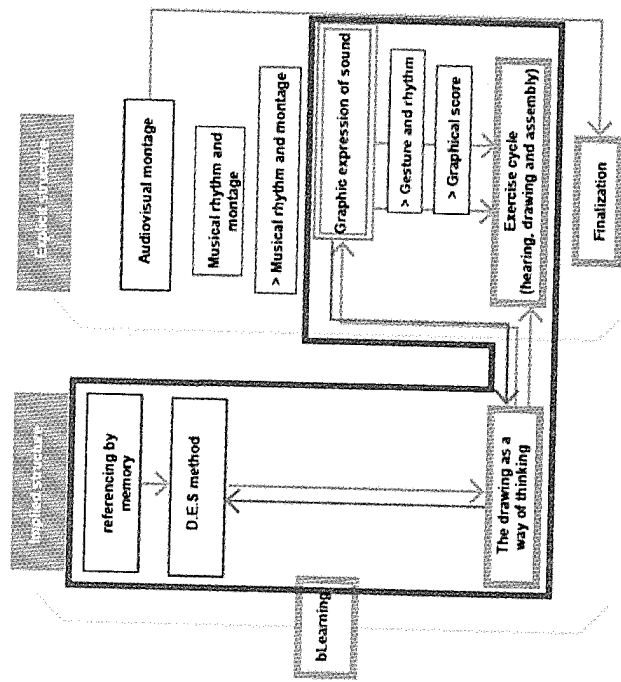


Illustration 3: experimental model structure.

The study under development seeks to present an alternative to the traditional learning model, by combining references and stances from different areas and offering a learning experience which is different to the linear sequential structure observed in the teaching of Communication Design, in the Motion Design component. We hope, at the end of this research project, to make a contribution to the practice of teaching in the area studied, encouraging interest among the professional community connected to the teaching of Communication Design in new research and the creation of new practices for teaching/learning models.

The author is grateful for the collaboration of the following people: his doctoral research supervisor Eduardo Herrera Fernández, Profesor Titular de Universidad –Facultad de Bellas Artes de la Universidad del País Vasco – Bilbao and co-supervisors; Fernando José Carneiro Moreira da Silva, associate professor of the Faculty of Architecture of Lisbon Technical University and Marina Estela de Vasconcelos Gonçalves, associate professor at Algarve University.

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