Professional Competencies Assessment in Audiovisual Projects for Higher Education

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ABSTRACT

Nowadays professional Competences criteria in Audiovisual Communication Projects have to include as an essential point of not only as a teaching methodology but also in any new learning framework. This paper shows a pilot experience with students of Audiovisual Communication at the Higher Polytechnic School of Gandia, EPSG in Spain, where an evaluation of professional competence has been used to improve the quality of the project and instruct students what the companies require. The aim was to lay out a transversal education project between various subjects implementing an interdisciplinary approach by coordinating curricular contents related to a common project during the course. Not only were methodological strategies for the teaching-learning model coordinated but also professional skills assessment of different subjects taught. Regarding professional assessment, three levels were proposed 1) evaluate individual knowledge students have acquired, 2) evaluate the group dynamic organization and 3) assess digital projects from professional point of view. Student's aim is to develop a complete and interdisciplinary project that can be implemented in the real world in an audiovisual enterprises or in their own future venture.

Keywords: *Audiovisual Communication, Assessment, Skills, Rubrics, Higher Education*

Introduction

Universities and Higher Education Institutions has to change their educational models into others centred on the student's professional promotion, which means a change of paradigm in the educative field. This change tries to centre the objectives of the degrees and their subjects, not only on the mere accumulation of theoretical knowledge, but also professional skills and personal attitude that allow the graduates to fill a space in society, (De los Ríos et al.,2010).

In this new learning framework, universities have to prepare students for new professional demands in a changing society. Therefore, students is expected to learn in an efficient competency system. (Bartram & Roe, 2005), (Villa Sanchez & Poblete, 2011). It is necessary to establish a teaching system that allows an all-round education for the students, and adapts to the needs of the society and the competitive labour market. This requires specific capacities profiles that allow a life-long learning.

The Tuning Educational Structures in Europe Project co-ordinated by the University of Groningen, The Netherlands, and the University of Deusto, Spain defines competency as:

“...a dynamic combination of attributes, in relation to the knowledge, abilities, attitudes and responsibilities that describe the results of learning in an educational programme, or what students are able to prove at the end of an educational process.” (González and Wanegaar, 2003:280).

Likewise, responsibility skills falls on the student who does not solely focus on acquiring knowledge, techniques, attitudes, procedures and values, but also applying them in an adequate manner.

As Legendre remarks *“...what matters is not only the types of mobilised resources, but the way the individual combines them to respond to an objective, adapting himself to the demands as well as to the restrictions of the situation....”* (Legendre, 2007:172).

That reason is important because student will be able to work autonomously and/or in work teams. They use knowledge as well as assumes and internalizes competencies taking into account audiovisual project context, (Magal-Royo, et al., 2010). Contextual nature of professional and technologic skills creates a conscious and reflexive learning process about how to begin and develop this type of project. As students learn to combine resources, they also learn to solve more and more complex situations. As a result, they will eventually become professionals with a high adaptability and problem solving skills, which is exactly what the current working world demands, (De los Rios-Carmenado et al., 2015).

Another relevant issue about skills assessment is its utility, because serves to students be conscious about his professional development needs feedback continuously because it comes to proof himself when they have to present their work in future audiovisual companies on market (Gullickson, 2007). Evaluating these competencies involves the observation of their whole elements. Tardif calls these elements as learning resources, since process and resolution must be evaluated. It corresponds to the teacher the assessment task, considering that he monitors the whole process and instructs the student to achieve her goals (Tardif, 2006).

The evaluation of competencies is based on the queries on the different evidences we have within reach with this information, it is possible to determine if students have succeeded in the development of their skills.

It is this way that the teacher must link results with evidences. Result is a grade justified on the outcomes of the competencies learned and rubrics are used to define indicators, these constitute a helpful source for the teacher, as well as for the student, to determine what are concepts to work on (Montgomery, 2000; Villa et al. 2011). Hence, we must consider three levels of assessment: 1)

Student assessment (knowledge that student has obtained), 2) Solutions laid out in context (student's dynamic organisation), and 3) project's assessment in its whole, from its conception to its final implementation.

Our experience comes from formerly commented premises: 1) Education centred in Higher Education, 2) learning system based on competencies, 3) knowledge's planning and problem solving methodologies, 4) assessment through rubrics, 5) empowerment students' autonomy (See figure 1). In this paper we expect to observe how students be able to acquire and develop professional competences when carrying out an audiovisual project and a coherent continuously assessment ways of professional and technological competencies.

Figure1. EPSG infrastructure for audiovisual courses (EPSG, 2019)

Methodology

The Project-Based Learning (PBL) was the teaching-learning method for this experience. With this methodology, students create a final product starting from their own ideas and finishing with their execution on praxis (Mettas & Constantinou, 2008). In this context, students pursue solutions to real problems, generating questions, debating answers, designing strategies, establishing conclusions, communicating ideas to each other... improving their own products and processes (Blumenfeld et al. 1991). Methodology forces the student to plan, create and evaluate a project from the development and application of the acquired skills, of their effective usage. The teachers offer the possibility to develop a final course work where all subjects are involved, a project where every subject contribute with independent competencies and assessment, yet interconnected when students face the challenge. Rubrics must serve as guidance for establishing evaluation criteria. The purpose of a transversal project is to progress in the interdisciplinary approach. It favours the coordination of the curricular content, and of the teaching-learning methodological strategies in each subject, all in a single project.

Regarding the student, tasks purpose is centered in allowing her develop a complete, interdisciplinary product out of the resources each subject contributes. The student should understand the complete framework of the project, and develop competencies related with their

needs. Regarding the teacher, it is necessary to establish a competencies assessment value as a whole.

Description of the Experience

In this research we consider a horizontal, interdisciplinary project, plus three subjects of the same knowledge area, multimedia, from the last academic courses 1) Audiovisual Communication, 2) Video Game Workshop, 3) Interactive Products Workshop and 4) Graphic Multimedia Design Workshop in Higher Polytechnic School of Gandia (EPSG), (Figure 2). These subjects complement each other and share common topics that allow develop a project from start to end. As an example, creating a video game does not only require programming, but graphic elements and the design of its interactivity. Through this experience, students can put into use their multidisciplinary knowledge and combine them to create a complete project.

Students are asked to create a final project, with a free topic and a professional nature. Participating in these projects is completely optional, due to the fact that the subjects involved are not mandatory neither. A student can decide if joining one, two or the three of these courses, and therefore we had to be understanding with their probable situation. However and regardless of the number of subjects they join, it is always possible for them to participate. It can occur that the student brings up a project where more than one subject intervene, or that the project is too ambitious and, because of its scope, it needs other students to participate, thus it is necessary to coordinate groups of students and subjects involved. This gives the opportunity to plan projects which functions are distributed between students, competencies can be developed, and the learning process is cooperative.

Figure 2. EPSG, 2019

Each student can contribute with the knowledge they acquired throughout the course, specifically from the multimedia area, or from their accumulated bachelor years. This allows developing either an individual or a group project, both of interdisciplinary nature that favours the resolution of problems in the closest to professional environments possible. Professionalism is reinforced because all of the teachers involved belong to the EPSG media group, a community of

teachers and professionals with wide experience in the multimedia industry, (Giménez-Lopez et al., 2010).

Before starting the next academic year, the teaching staff met to lay down the broad outline of the project during the semester and to agree on a work plan. First day of class, the interdisciplinary project was presented in detail to the students, from final objective to production phases including rubrics, evaluations or assessments criteria that would serve to appraise them (see table 1).

Table1

Professional criteria assessment

Defining their objectives	Defines and identifies objectives correctly	Defines but does not identify objectives correctly	Defines but cannot identify objectives	Does not define objectives correctly	Cannot define objectives
Stage of the multimedia project	Knows how to distinguish and execute the project	Distinguishes but does not execute the project correctly	Distinguishes but cannot execute the project	Does not distinguish the project correctly	Cannot distinguish the project
Obtaining information	Analyses and synthesises the information	Analyses but does not synthesise the information correctly	Analyses but cannot synthesise the information	Does not analyse the information correctly	Cannot analyse the information
Managing information	Classifies and assemble information	Classifies but does not assemble information correctly	Classifies but cannot assemble information	Does not classify information correctly	Cannot classify information
Selecting and using technology	Uses and optimises the technology	Uses the technology correctly	Uses the technology incorrectly	Knows what technology to use	Does not know what technology to use
Innovating and achieving objectives	Responds to objectives and innovates	Responds to objectives implementing improvements	Responds to objectives	Responds to the objectives incorrectly	Does not respond to objectives

Source: Giménez-López (2016).

The rubric had a perfect score of 6 points, 1 point per concept, the whole project influenced the marks 60% of each subject. Every item was explained in class, so the students would be clear about what learning process was demanded from them. Projects were personal, meaning that each student or group were free to choose their own theme (e.g. a children's shoes shop website). Students would have to make a briefing, plan the work accordingly to the time available, and clarify the objectives (to sell shoes), needs of the clients or users (parents in need of a new pair of shoes for their kids) and the owner's needs (to edit the content adding new models or campaigns). Having to solve these problems, questions like market competence arise. There is, as a consequence, the necessity of a research previous development.

After the students laid out their work plan, they had until the end of first semester of the academic year to present the proposal to the teaching staff. In the meantime, the subjects involved are providing the knowledge needed for the projects development. The teaching staff reviews the proposals and make the convenient corrections for constraining their scope in a reasonable time schedule. From this point on, students can start preparing the necessary materials and tools for the execution of their projects. During this time, there are mentoring meetings with the groups to monitor the development and solving doubts. At the end of the second and last semester, students present a dossier with the final project. The students have responded well to this initiative.

Results

The students' satisfaction with the project methodology used was evaluated throughout a 35 questions, which was divided into the following blocks: 1) Learning, 2) Course organization, 3) Teacher interaction with the group, 4) Teacher interaction with the student, 5) Training content, 6) Project assessment. A free text section was included to obtain an additional commentaries from student appraisalment.

The questionnaire was scored with a Likert scale (0 to 5), where 0 means "completely disagree" and 5 means "completely agree" (Baray, 2006). The survey was made online for the students anonymously and voluntary and it was filled it for 17 students out of 23. The scores were: Learning section: Average global results: 3,8, Course Organisation section: 3,1, Teacher interaction with the group section: 4,8, Teacher interaction with the student section: 4,7, Training content section: 3.5 and Project assessment section: 4,7.

Students underlined several remarks in free text comments section of the survey such as the project being *"...very useful with regard to our future, because it is the order of the day"* and *"because everyone wants to update themselves to be visible in the sector. In fact, I have been offered to create a website already."* Above all, they emphasise *"...the teachers' interest and help they offered when needed."* Another student focuses on *"...the possibility to carry out your own projects and them being useful later, outside the academic environment."* The students also comment *"...feel that [they] had to carry out a higher effort and [they] had to adapt one subject to the other, which is positive because it makes you work more and better,"* it was a *"possibility to share with other classmates and it made [them] able to put [themselves] in a real life situation."*

Discussion

This kind of multidisciplinary approach favours an integrating, learning process and enhances student confidence on its work. It fosters learning through researching resources. Regarding the assessment on the solutions considered in this context, the student assumed responsibilities, faced unexpected problems and offered solutions while taking into account the points of view of different disciplines. Students learned to organise project content and final results. They learned to make their own decisions, to be autonomous, acting independently and being creative and innovative using learning resources to develop their competencies. They become completely autonomous in

the future for the conception, design, implementation and development of a new audiovisual products or services.

This is an experience that could be transferred to other knowledge areas as multimedia projects and interactive design projects. It could be used in those subjects that share a core theme. With a continuous assessment method during the project duration it is possible to motivate the student, to make him see the usefulness of what he is doing. Students start having transversal tasks instead of isolated exercises for each subject during their whole academic career. It is deducible that students must establish their time dedicated to put in common all the subjects involved. In reality this is quite hard to happen.

As we expect students indicated that teacher's coordination was insufficient, and it reflects the necessity of enable a time and a space where teachers and students can debate and agree on their strategies for the development of their projects, something unavailable due to schedule incompatibilities and spaces assignment, (Magal-Royo et al. 2012).

With this methodology we made students find answers to common problems in audiovisual project take into account of their limitations, and motivated by the idea of making their own conceived project in a professional way. Student were able to assimilate professional and technological skills, but also to develop an others abilities like relationships and interpersonal communication during project development.

Conclusion

In conclusion, we could state that students have adapted well to this learning methodology. In conclusion, we could state that students have adapted well to this learning methodology in audiovisual project performed in the audiovisual communication grade related. When facing a project from different perspectives, student realised its complexity and, at the same time its huge potentiality of different solutions. In fact, most of them brought up diverse audiovisual products and services facilitate the exchange of ideas. They have learned to work autonomously and collaboratively as a team group and they had to decide what their project was, assuming the subsequent problems and providing solutions to them. Furthermore, this process made possible for the student to understand the complete picture, to embrace the contextual nature of their learned competencies, and respond in consequence. Now they combine learning resources and put an answer to complex situations. As a result, they have become professionals with a high adaptability and problem solving abilities.

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References

- Bartram, D. and Roe, R. (2005). Definition and assessment of competences in the context of the European Diploma in Psychology. *European Psychologist*, Hogrefe & Huber Publishers Vol. 10(2):93–102. DOI: 10.1027/1016-9040.10.2.93
- Blumenfeld, PC. Soloway, E., Marx, RW, Krajcik JS. Guzdial M. and Palincsar A. (1991). “Motivating project-based learning: Sustaining the doing, supporting the learning.” *Educational Psychologist*, Vol. 26 (3&4), pp. 369-398. DOI: <https://doi.org/10.1080/00461520.1991.9653139>
- De los Rios-Carmenado, I., Lopez, FR. and Perez Garcia, C. (2015) Promoting Professional Project Management Skills in Engineering Higher Education: Project-Based Learning (PBL) Strategy. *International Journal of Engineering Education* Vol. 31 (1), pp.184-198.
- De los Ríos I, Cazorla A., Díaz-Puente JM and Yagüe JL., (2010). Project-based learning in engineering higher education: two decades of teaching competences in real environments. *Procedia - Social and Behavioral Sciences*. Vol. 2 (2) pp. 1368-1378. <https://doi.org/10.1016/j.sbspro.2010.03.202>
- Giménez-Lopez J.L., Magal-Royo T., García Laborda J. and Dunai L. (2010), Active methodology in the audiovisual communication degree. *Procedia - Social and Behavioral Sciences*. Vol.2, (2) pp. 4487-4491 DOI: 10.1016/j.sbspro.2010.03.717
- González Ferreras, J. and Wanegaar, R. (2003). Tuning educational structures in Europe. Informe final. Fase uno. Editorial Universidad de Deusto-Universidad de Groningen., Bilbao, España ,ISBN: 978-84-9830-642 http://tuningacademy.org/wp-content/uploads/2014/02/TuningEUI_Final-Report_SP.pdf [Consulted January 30, 2019]
- Gullickson, A. R. (2007). Estándares para la evaluación de los aprendizajes de los estudiantes. Recursos e instrumentos psico-pedagógicos. Universidad de Deusto. *Mensajero Ed.* Bilbao, España ISBN: 9788427129191
- Legendre, M.F. (2007). L'évaluation des compétences professionnelles. En L. Bélair, D. Laveault, D et C. Lebel (dir.), *Les compétences professionnelles en enseignement et leur évaluation*. Ottawa: Presses de l'Université d'Ottawa, pp. 169-179
- Magal-Royo, T., Tortajada Montanana, I., Gimenez-Lopez, JL. and Gimenez Alcalde, F. (2010) New educative methods in the usage of audiovisual content in mobiles. *Innovation and Creativity in Education*, edited by Uzunboyly, H. Book Series: *Procedia Social and Behavioral Sciences*. Vol.2 (2) pp. 4492-4496. <https://doi.org/10.1016/j.sbspro.2010.03.718>
- Magal-Royo T., Jorda-Albiñana B., Gonzalez del Rio J., Ampuero Canellas O. and .Giménez-López J.L.,(2012) Online collaborative environments in the creative process of product development for engineering students. *World Conference on Design, Arts and Education*. Vol. 51, pp. 677-681 DOI: 10.1016/j.sbspro.2012.08.223
- Mettas, AC., Constantinou, CC., (2008). The technology fair: a project-based learning approach for enhancing problem solving skills and interest in design and technology education. *International Journal of Technology and Design Education*, Vol.18 (1) pp.79-100. <http://dx.doi.org/10.1007/s10798-006-9011-3>
- Montgomery, K. (2000). Classroom Rubrics: Systematizing What Teachers Do Naturally. *The Clearing House”; Education Module*, Taylor & Francis, Ltd. Vol. 73 (6) pp. 324-329. <https://www.jstor.org/stable/30189610> [Consulted January 30, 2019]
- Tardif, J. (2006). “L'évaluation des compétences. Documenter le parcours de développement. Montréal”: *Chenelière Éducation*.
- Villa Sánchez, A., Poblete, M. (2011) Evaluación de competencias genéricas, principios, oportunidades y limitaciones”. *Bordón. Revista de Pedagogía*, ISSN: 0210-5934 Vol. 63, (1), pp. 147-170