OPEN ACCESS

Journal of Advanced Research in Social Sciences
ISSN 2538-919X

Ai, ei, oi: A Project-Based Interdisciplinary Project Against Gender-Based Violence

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ARTICLE INFO

Keywords:
cooperative and multilingual methodology,
gender studies,
motivation studies,
musical and social education,
PBL

ABSTRACT

Competence describes pedagogical processes involving teachers, students, contents, methodologies, and skills for new social and academic grounds. It encompasses gender equality-based awareness to enhance students' critical thinking as active educators. This longitudinal study describes an interdisciplinary project to raise awareness of gender equality at secondary school, provides a space for teachers and students to address gender-based violence in a flexible student-based and response-based PBL methodology while self-sustained engagement and motivation heightens more complex cognitive development and competence. Results conclude that intrinsic motivation levels increase dramatically when students' awareness regarding social impact is accomplished, schools benefit from students' inclusion in planning and decision-making processes, and gender awareness is enhanced as they become active social educators. Most importantly, students' self-motivated and sustained increase of meta-awareness and metacognitive strategies relate to active decision-making in the context of gender-based violence and social and academic education.

1. Introduction

The current study analyzes the case of a Music, Language and Literature interdisciplinary project within the context of gender equality and prevention of gender-based violence. In order to help students empower and to make them active educators while simultaneously helping them raise awareness of such social and academic problem, Music and Language and Literature departments approached 15–16-year-old students in the 4th grade of Compulsory Secondary School students to compose, produce, record and air a song within the framework of project-based and cooperative learning methodology. This case analysis did possess certain specific objectives: on the one hand, it served the purpose of offering an insight into cooperative learning processes as well as musical, literary, and linguistic development of the students in an attempt to transcend the limitations of traditional pedagogy and traditional compulsory curriculum and instruction. On the other hand, it was highly expected to find higher rates of

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Cite this article as:
Zurutuza, K. P., Ansa, I. A., Cabeza, M.d. P., Asurabarrena, E. G., & Schnabel, E. O. (2024). *Ai, ei, oi:* A Project-Based Interdisciplinary Project Against Gender-Based Violence. *Journal of Advanced Research in Social Sciences, 7*(4): 33-55. https://doi.org/10.33422/jarss.v7i4.1308

self-sustained intrinsic motivation related to the increase in the awareness of the project's social and academic impact and the disappearance of gender bias or difficulties emanating from the difference in musical abilities of students. Finally, the most outstanding element which characterized the project was its inception, for it was born out of the cooperation of one Music and two Language and Literature teachers and the students themselves, not out of school curriculum. The study also proved that students' inclusion in decision-making spheres enhances students' own awareness of their social and academic role and helps efficiency related to the identification and tackling of gender-based violence phenomena at school, as students themselves become more intrinsically motivated. Considering the scarce number of interdisciplinary studies regarding music, language, literature, and cooperative PBL contexts in the Basque Country —and Spain in general— (Eusko Jaurlaritza, 2023), we attempt to provide data and scientific validity to the field as well as describe the construction of such projects and the psychosocial and academic dynamics involved as a valid tool for other future studies sharing the same focus.

The design of this study transformed the whole plethora of stages and processes involved within the scope of the student-centered teaching and learning environment while encouraging the teachers to adopt a differentiated perspective to successfully reach the common goals established. To this respect, as Slavin (1983), Railsback (2002), Perrenoud (1999, 2004, 2023), and Gimeno Sacristán (2011, 2013) claim, pedagogical processes must fulfill certain key factors: *i)* accessibility; *ii)* cultural difficulty; *iii)* task familiarity, *iv)* the teacher's role, and *v)* cognitive difficulty. These would include the development and enhancement of the students' creative musical and literary abilities while, simultaneously, overcoming the technical difficulties related to musical and video production, sound processing and recording, mixing, and mastering as they tackled gender-based violence and raising awareness of the need to prevent it from occurring at school.

We approached project-based methodology aiming at the development of students' competential profile through the design of a project that would involve different skills to be used in a multiplicity of manners. As students would carry out such task in the settings of a Music classroom and they would compose a musical and literary piece on a socially sensitive topic as gender equality and gender-based violence, it was important to contemplate their musical, linguistic, and literary competence as much as their creative impulse and drive. Moreover, other skills responding to analytical, creative, or communicative —intrapersonal and interpersonal— competences, among others were given due consideration due to the intrinsic role they had. This constitutes one of the factors related to the significance of the study, as it describes PBL contexts in multidisciplinary projects analyzing multi-competential design, which are lacking in our educational context in the Basque Educational System during recent years.

The project proved to be successful and excelled initial expectations. The study shows that students displayed high levels of efficiency when composing and producing the song and at all decision-making stages. The significance of the study also lies upon the fact that, besides curricular development, it is possible to generate greater social impact when including students in decision-making spheres related to curriculum and everyday life at school. Doing so students' motivation increases as students' inclusion in decision-making spheres provides a space for students to interact, share ideas, decide, and act, which feeds students' social and academic performance and strengthens feelings of belonging. We conclude this takes place because it facilitates students' active empowerment at school life. The results also show higher marks due to higher motivation and action rates.

Such positive results show another aspect related to the significance of the study, as while it helped further projects emerge at the hands of the same students and others willing to participate, it has also helped become a canvas for other neighboring schools to make this project their own, develop their own projects and help schools form a net to generate symbiotic cooperation of students, teachers, and other public agents to address a social problem of this nature.

The first part of the paper shall provide the reader with the *literature review* that supports the method adopted. Once established, a following chapter shall account for the *objectives* and *research hypotheses* the project aimed to fulfill. A third chapter shall describe the *project* itself, including the settings, age and educational stage, and the different parts and activities involved. Then, the fourth chapter shall deal with the *competences* upon which the project attempts to concentrate and, consequently, develop. Finally, chapter five shall account for the *assessment* while chapter six shall provide *results and discussion* in order to shed light upon the results obtained and their validity.

To conclude, we shall state the *conclusions* and the *limitations* encountered. Finally, we shall also provide *future lines of research*, *acknowledgements*, and *References*.

2. Literature review

Music and Language and Literature teaching and project-based learning methodology have turned to content-based instruction and project work to enhance meaningful engagement with musical theory, composition, performance, and language and literature contents within the framework of interdisciplinary projects targeted at the theoretical, practical, creative, and —most important of all— intertwined acquisition of competences. As the current paper analyzes a PBL —*project-based learning*— scenario born out of the consideration of interdisciplinarity and cooperative pedagogy to shape teachers' and students' social, emotional, affective, and academic behavior, the nature of cooperativeness and interdisciplinarity offers new grounds to further competential development and content acquisition as the students' metacognition and other emotional, communicative, affective, and organizational skills develop along the way. They *i)* learn through their own work and the development and acceptance of peers by means of democratic relationships (Frabboni, 2001a, 2001b, 2001c; Dewey, 2009; Giroux, 2009) *ii)* alongside reflective performance, minds, and attitudes (Pourtois & Desmet, 1997; Johnson & Johnson, 2004; Perrenoud, 1999, 2004, 2023) summarized in *iii)* the *learning to cooperate, cooperate to learn* moto as a *iv)* means to create and sustain learning cooperation to obtain significative learning (Slavin, 1983; Pourtois & Desmet, 1997; Johnson & Johnson, 2004; Dewey, 2009; Pujolàs Maset & Lago Martínez, 2018). As the current study shows, these would certainly transcend and, thus, overcome the current limitations of traditional pedagogy, which make students' active role shrink into mere repetition of drilling exercises and passive roles related to it (Johnson & Johnson, 2004; Gimeno Sacristán, 2013).

Stoller (1997) and Railsback (2002) define project-based instruction as the model in which students plan, implement, and evaluate projects which have applications in the real world beyond the scope of a classroom. Both authors describe certain characteristics, such as: *i)* it would be featured by the focus on content learning rather than targeted specific tokens; *ii)* it is student-centered, while the role of teacher would be that of guidance and support, helping the maximization of 'human capital' output (Fernández Enguita, 2015), favored by *iii)* cooperative behavior rather than competitive (Slavin, 1983; Iglesias Muñiz et al., 2017; Pujolàs Maset & Lago Martínez, 2018); *iv)* it would integrate skills and competence mirroring real-life tasks, which *v)* would derive in an end-product; and, *vi)* would develop through integral processes emanating from the increase in students' motivation as it is them who would be the active part

of the decision-making affecting first-hand research, (inter)cultural sensitivity as well as observation of local needs, and final feedback from a variety of sources (Perkins, 1992; Tonucci, 1997; Pineda-Alfonso, 2015).

Project-based methodology and interdisciplinary approach would attain the notion of *competence*, which is the general trend nowadays (CEFR, 2017; Eusko Jaurlaritza, 2023). Gimeno Sacristán (2011, 2013, 2015) displays his concern regarding the appropriate definition of competence as a theoretical construct, for it responds to a multiplicity of forms, demands, and conceptions regarding the validity of practical approaches of contents in detriment of integral development of students in favor of a practical emphasis of the utilitarian conception of education, which would be formulated as a knowhow affecting any *i)* human behavioral —(inter)personal intelligence—; *ii)* intellectual —application of the necessary means to successfully interpret any given information—; or, *iii)* communicative act which may not necessarily be attained or promoted by educational institutions. In fact, Feito Alonso (2011) would demand competence to be effectively and efficiently established beyond ever-changing demands which emanate from social and political constraints of any particular moment —The Lisbon Council and DeSeCo Report (OECD, 2002)— in order to guarantee the students' correct educational development (Clemente Linuesa, 2011; UNESCO, 2005).

As this project was designed based on *competence*, it needed to bridge musical, linguistic, literary, and social and emotional aspects related to social dynamics to foment students' cooperative behavior beyond personal goals or competitive idiosyncrasies related to final marks that may generate ill-feelings or social interactions and decrease in motivation levels. To this respect, focus on competence helped intertwine content and the process of acquiring knowledge estimated to be meaningful and —inherently— useful for the student in their future life (Fernández Enguita, 2015), hence, favoring cooperative behavior. Additionaly, amidst the demand for students to be proficient in the usage of ICT, it would also respond to the students' necessity to face information excess, for which the demand to effectively manage such information load is required (Cano García, 2008). Furthermore, students need to efficiently adapt to the dynamics of economic and social changes and the classroom must adopt the role of providing students with the necessary input and tools for generative thinking and greater students' autonomy beyond current poor reflective attitudes and fragile knowledge and skills (Perkins, 1992; Perrenoud, 1999, 2004; Luengo et al., 2008; Robledo et al., 2015). This was key when addressing gender equality, least to say when it comes the prevention of violence.

As Gimeno Sacristán (2011) states, this is not a new trend, for project-based methodology is an evolution of content-based instruction as of the eighties and nineties. However, Stoller (1997) had previously acknowledged its value and development during the nineties, which was caused by the interest in the findings of cognitive psychology. Regarding project-based methodology, Stoller (1997) pointed out certain values of content-based instruction: *i)* Singer's (1990) postulation of thematically organized materials favoring easier learning; *ii)* Anderson's (1990) idea of coherent layout of meaningful information enhancing better processing; *iii)* establishment of the relationship between motivation and interest (Alexander et al.; 1994); and, *iv)* Bereiter & Scardamalia's (1993) defense of expertise development when students reinvest their knowledge in the acquisition of newer and more complex one. In a practical approach, interdisciplinary project-based instruction would include contents to be managed through projects designed and developed through the effective management of intertwining cooperative learning processes emanating from elaborated tasks-based strategies.

This project attempted to go beyond the boundaries established by the generally accepted definition of *competence* and practical notions of learning as a dichotomy which based learning upon mere development of learning processes and (meta)cognitive strategies merely through

applied significance of the learning steps as a symbol of fulfillment of certain established goals. We favor this conception and, as a variety of critical literature describes, claim this is a corruption of learning processes in favor of such ideologies and conceptions of students as recipients to be *trained in skills* and *not instructed in knowledge* so as to *generate entrepreneurship at the hand of workers in detriment of intellectual freedom of critical citizens through the taming of the mind* (Chomsky, 2001; Laval, 2004; Laval & Dardot, 2013; Fernández Liria et al., 2017). Acknowledging there is a very strong trend to consider competence as an ethos within Pedagogy which pursues practicality, training in emotions and skills to develop intrinsic forces of *self*-motivation and, ultimately, the students' —perceived as working professionals— ability to move beyond whatever learnt (OECD, 2002) as a means to respond to the demands of a *liquid* society and enterprise (Bauman, 2005a, 2005b, 2015; Fernández Liria et al., 2017); it was very important to develop both content learning as well as skill and competence learning as the general vehicle toward learning awareness to thwart students from believing the *illusion* of development and learning while, either conscious and/or unconsciously, driving them to what Michéa (2002) and Fernández Liria et al. (2017) dub as *the school of ignorance*.

Therefore, as González Arroyo (2015) points out, curriculum has come to acknowledge the significance of knowledge and its value as a core asset and competence of the student. In fact, curricular design redefines contents beyond humanistic approach to transcend mere acquisition of contents through drill methods to enable students' increase in the capacity as for *what* and *how* to learn and to think (Johnson and Johnson, 2004; Perrenoud, 1999, 2004; Pérez Gómez, 2015) aimed at proactive solidary attitudes to compensate the development of economic unbalances, to which Pérez Tapias (2015) and Rodríguez Martínez (2015) add the notion of multicultural identity and feminist awareness, respectively; which constitutes the framework in which our project is set.

To prevent this from happening, special emphasis was put upon learning processes themselves and project design both from the students' and the teacher's perspective. Thus, it was natural to follow cooperative behaviors at all levels and stages in order to guarantee the development of knowledge and (meta)cognitive strategies while providing content teaching in order to fulfill individual learning and accomplishment of goals as well as those of peers while avoiding individual success and excluding competence as the vehicle toward collective goals and *real and realistic integral and inclusive education* as a way to pursue the students' quest for culture, critical and knowledgeable mind, and happiness (Slavin, 1983; Michéa, 2002; Perrenoud, 1999, 2004; Bauman, 2005a; Dewey, 2009; Clemente Linuesa, 2011; Feito Alonso, 2011; Gimeno Sacristán, 2011, 2013, 2015; Fernández Enguita, 2015; Iglesias Muñiz et al., 2017; Pujolàs Maset & Lago Martínez, 2018) as conceived by the UNESCO (2005).

3. Objectives of the project and research hypothesis

The main objective of the study is to describe the multi-competential design of an interdisciplinary project to address a socially dramatic phenomenon —gender-based violence— and to provide scientific evidence that validates PBL and cooperative design as a significative tool to address any social problem and academically work on it as a projection of society at school scenarios. Current designs are scarce in Spain and little evidence exists on longitudinal studies of this nature (Eusko Jaurlaritza, 2023). We believe that the limits of traditional curriculum may be transcended when considering students as the initial and final targets of all academic design and development of curricular items and fields of knowledge. This may occur when PBL and cooperative pedagogy may encounter to make students act beyond passive and limited dynamics of traditional instruction (Gardner, 1995; Pujolàs Maset

& Lago Martínez, 2018). When students become empowered and active at all decision-making spheres, they develop a higher and more significant feeling of belonging and this leads to more active motivation and efficiency of action (Slavin, 1983). Considering the limited nature of evidence of this nature and the lack of studies in our educational system in Spain, we attempt to provide scientifically and pedagogically valid evidence and show our study as a model for others to discuss and/or implement, which would help the development of more studies and data.

Besides the intrinsic value of musical, literary, technical, and social awareness and content integration, the interdisciplinary nature of the project demanded an awareness of the multiple manners in which both the teaching and learning processes may be designed and developed so as to make such learning process efficient and successful to its maximum. Thorough design of this process need reflect upon the different intelligences, skills, and processes involved, for these must adapt to the specific cognitive, emotional, and psychosocial features of the individual student so as to help analytical and creative development occur (Gardner, 1995). This responded to our first research hypothesis, which was that the multi-competential design of an interdisciplinary project was going to be cognitively, emotionally, motivationally, academically, and socially more efficient than traditional curricular design on two grounds: on the one hand, the production of a song —both music, lyrics plus decision making and obtaining high social impact— as curriculum only relates to *interpretation, not complex composition*, and on the other hand, when addressing gender equality and gender-based violence. This would occur as it involved *i)* multiple areas from music, language and literature working together and obtaining continuous feedback from each other as well as *ii)* necessary decision-making abilities from the students, which *iii)* were necessarily to emanate from cooperation and the necessity to bridge gaps between traditional curricular disciplines that, as individual spheres of knowledge, did not involve active and self-sustained motivation and cooperative behavior out of students, whereas an interdisciplinary PBL project does.

All pedagogical process started off by considering the student as the core element around whom the whole process was to unfold and develop. The teacher's role was to be that of a guide rather than that of the unidirectional source of a passive process involving delivery of certain content (Slavin, 1983; Iglesias Muñiz et al., 2017; Pujolàs Maset & Lago Martínez, 2018). This does not mean the teacher had to adopt a passive role. On the contrary, the teacher needed to be as active as the student to be aware of the diverse subtleties that could arise throughout the project. The teacher needed to observe such dynamics involving correct planning, behavioral patterns, interpersonal communication, or adequate musical, literary, and linguistic delivery to be able to identify ill-feelings and nuisances which may derive in failure and subsequent frustration, which requires great and efficient pre-planning from the teacher (Gimeno Sacristán, 2015; Robledo et alumni, 2015) with special attention to the management of these elements as well as the efficiency and difficulties of use they may have as valid educational tools (Giménez et al., 2015; González Pérez & Pons, 2015).

Related to the first research hypothesis, a second hypothesis was linked to the social and interdisciplinary nature and topic of the project as the canvas upon which students would need to make the best use of their competence to further develop their knowledge and efficiency of performance as they would be able to critically analyze the elements motivating the project, possible outputs, criteria of sustainability, ecology, efficiency, feasibility, or interpersonal justice and solidarity in order to pursue the highest degree of success and impact. Moreover, the project attempted to emphasize through its design the students' awareness involving their own process of learning to favor self-autonomy and reflective knowledge (Perkins, 1992; Tonucci, 1997; Johnson & Johnson, 2004; Perrenoud, 1999, 2004, 2023). Hence, this constitutes our second research hypothesis was that students' meta-awareness and

metacognition strategies would increase and become more complex and efficient when comparing to those displayed by students of traditional curriculum.

Finally, our third research hypothesis was that students would be more highly competent, intrinsically motivated, and more prominently proactive in decision-making spheres in and out of school, design of further projects, and in the plethora of facets related to cultural and gender diversity and social otherness —language, register, formality, social pragmatics, or empathy, among others—. This would mostly reflect upon the social impact they were to generate when compared to that of traditional curriculum's demands. It was only natural to believe so considering this project was designed with the students as composers, which attempted to enable the students' critical capacity to make them proactive for future development of further projects emanating from this.

Hence, such task required deep analysis from the students. It was of uttermost importance to make students realize that music, literature, and gender-based violence awareness were a means to access the variety of cultures present at school and the town and to consider this as a tool to become more complete as individuals so that they may become culturally proficient, proactive in social and interpersonal interaction, critical, and tolerant with regard to cultural and social otherness (Ward, 1976; Hart, 1987; Ascher, 1991; Spencer, 1991; Chawla, 1995; Tonucci, 1988, 1997). Therefore, the project also considered the role of other students as citizens within every social sphere involving decision-making as an asset of paramount value within paradigm of Tonucci's *Children's City*, to which many cities throughout the world have adjoined. Hence, the role students may possess within the organization of the school and town and its various decision-making spheres was thought to be another purpose the project ought to reflect. This would facilitate students' development as more just, tolerant, culturally proficient and cultivated people. Additionally, it would help students proactively become creative and knowledgeable to better themselves as individuals and part of a more just, culturally healthy and tolerant, sustainable society. This constituted our third research hypothesis and strengthened the significance of our study.

The pedagogical framework in which students' curriculum is set requires certain fields of knowledge, production, and performance regarding music and language and literature disciplines, spanning from theoretical knowledge regarding musical composition, harmony to literature trends or linguistic abilities regarding reading, writing, listening, and performance in due formal register and time constraints.

In addition, a fourth research hypothesis was related to the purely scientifical format of the final paper to be written, in other words, the research hypothesis was the consideration of the feasibility to develop highly demanding format and content beyond the scopes of Compulsory Education curriculum demands. Considering the students are 15-16 years old enrolled in the 4th course of Compulsory Secondary School, the writing of a scientific paper in due format with due content was beyond expectation. However, such proposal was accepted, and the result is the current paper.

Therefore, such task was to be approached in two separate stages: on the one hand, besides literary and musical composition and analysis of gender-based violence, students had to be able to pursue pragmatic adequacy in their own native language —Basque and Spanish— when needing to compose and, later, communicate with pertinent staff at school and Town Hall, which was to be held in Basque as a self-motivated requirement of the Town Hall linguistic policy. On the other hand, they also had to be able to cope with the formal requirements of the project and subsequent writing and presentation of their work and pedagogical background and support in the form of a scientific paper, which implied due form in English within the scientific

formats internationally accepted. Hence, as the written format of the project followed APA formatting, all scientific criteria would have to be mastered.

Hence, linguistic objectives involved the correct written format of the project in English, as just pointed out, but also the efficient display in a digital form as a future presentation with a narrated —in Basque and/or English— delivery of the most important elements which form the project.

4. Project layout, justification and stages

The project covered the students' analysis of one of the current problems and elements causing severe damage to the urban tissue underlying civic life at its different dimensions, that is, gender-based violence and gender equality at school and everyday civic life with its various manifestations. Furthermore, students tackle such goal with the personal awareness of the fact they form such tissue themselves, which involves their active role in the analysis and the decision-making stages which are required throughout the analysis. Therefore, an *initial stage* was to consider the display of those attitudinal, analytical, and descriptive components in order to provide themselves a valid framework within which they were to set their own project. Such task was carried out inductively in order to maximize students' analytical performance, for which data collection from a variety of sources and its validity and use to make correct analysis and efficient and effective postulates was addressed, as well as the efficient management of the digital and human resources at their disposal.

After this general framework had been established, a *second stage* consisted of the formation of a working team, workflow system, and timing. Thus, students based these upon the establishment of efficient working patterns, tasks, and due timing estimations. The objective followed the pursue of analytical criteria to make students' awareness grow in terms of maturity, both cognitive as well as emotional and affective in the search of symbiotic rapport that may create increasing and sustainable motivation and conscious learning process. This was to be paramount when delivery of the good.

A *third stage* involved the analysis of the current situation of gender equality and gender-based violence and its manifestations at school and civic life in town. The general agreement of the project involved *i)* the composition of a song with due production, literary lyrics with due register; *ii)* recording means available so as to record the song with professional quality; *iii)* the development of greater quality and more intelligent spaces for intergenerational communication and co-inhabitance to carry out interdisciplinary tasks; *iv)* the establishment of the means available to make the song and its videoclip be aired and spread across the province in order to become a model for future initiatives; *v)* raise awareness regarding a sensitive social topic that affects everybody's lives; and *vi)* to write a scientific paper and find support and delivery through a scientific congress, which required putting the students and the teachers involved in the diverse decision-making spheres to provide due input and consideration when official decisions are made—Tonucci's *Children's City* project—.

Then, a *fourth stage* dealt with the contrastive forms of data analysis in order to provide the project with due scientific support and was performed through the comparison of an experimental and control group, the former related to this project while the latter related to everyday regular class environment and activity. A *fifth stage* involved writing and correctly formatting the project as a scientific paper. They also provided future lines of research and a presentation both for other school courses in a public act and a second presentation in a public act at the Town Hall premises for all people in the town, which also included fund raising perspectives.

5. Working methodology, Interdisciplinary cooperative learning

As previously said, how all human resources were to be organized and how to work to the greatest of efficiency and effectiveness possible was a key factor of paramount consideration. It was very important to guarantee real cooperation would generate actual fulfillment of the purposes of the project to locate knowledge, joy, and freedom of citizens through the awareness of justice, proactive attitudes affecting (intra and inter)-personal development with a sense of empathy and ethical behavior to better the direct environment in which students live (Hart, 1987; Perkins, 1992; Tonucci, 1997; Michéa, 2002; Laval, 2004; Perrenoud, 1999, 2004). Therefore, *interdisciplinary* approach and *cooperative learning* were believed to be the ideal environment in which the project was to be performed for it did require cooperative behavior so as to gather real and free citizens who were to be linked as actual equals (Chomsky, 2001). It was important to vanquish any competition feeling as a means to generate power structures which would generate negative interpersonal relations and ill-feelings, which would, indeed, play a negative role in the fulfillment of the project and affect motivation (Chomsky, 2001; Fernández Liria et al., 2017; Aranda Adame, 2018; Pujolàs Maset & Lago Martínez, 2018).

Moreover, as Echeita (1995) and Torrego and Negro (2012) analyze, cooperative learning was to satisfy *i)* the need for positive interdependent personal and working dynamics; *ii)* ethical efficiency; *iii)* inclusive behavior and role of education in favor of *iv)* democratic attitudes and values emanating from the respect to the self and the others.

6. The role of the teacher

Cooperative learning involved furthering the classroom and ideological constraints of traditional instruction (Iglesias Muñiz et al., 2017; Pujolàs Maset & Lago Martínez, 2018), which would be, basically, featured by the Chomskyan notion of 'taming of the mind' conceived and performed via the generally accepted idea of the teacher possessing the knowledge and the students as the empty vessels with contents and behavior patterns to be poured into (Chomsky, 2001). This imbalance of roles and positions ooze a power structure consciously to be avoided. Thus, it was paramount to deviate from it to implement a working and learning environment based upon interdependent relations via students treating and teaching themselves through equal and balanced action and fulfillment of needs.

Therefore, the teacher's new role would facilitate decisions regarding the structure of the activity, nature and structure of authority, reward, and goal (Johnson & Johnson, 2004; Iglesias Muñiz et al., 2017). Consequently, the diverse stages of the project needed to be carefully designed in favor of efficient working policies and workload, avoidance of internal tensions, provide various spheres of decision-making and autonomy of action, and, finally, positive interdependent behavior with proactive cooperation and self-sustained motivation.

7. Competences

As indicated in the literature review, competences are subject to a multiplicity of definitions and approaches responding to different educational trends influenced by social, political, and economic forces. Consequently, the Council of Europe decided to create the *Common European Framework of Reference for Languages* —CEFR— initiated in 2000, and basic competences were defined in 2005. The latest version after due review processes displayed the most recent definition of competences and descriptors in 2017 and 2023. The Council of Lisbon (2002) defined competences as the 'new basic skills of learning process throughout life' as stated in the *Basic Competences in the Basque Educational System* (2017) elaborated by the Basque Government. The Council of Lisbon initially defined 8 different competences aimed at

the 'more competitive and dynamic economy of world knowledge, sustainable, accompanied by employment of greater quality and quantity towards greater social cohesion (7). These 8 competences included *i)* communication in native language; *ii)* communication in foreign languages; *iii)* ICT; *iv*) calculus and mathematical competence; *v)* entrepreneurship; *vi)* civic and interpersonal competences; *vii)* learning to learn; and *viii)* general cultural background and cultural and artistic expression.

Subsequent revisions led to the final version published in 2023[1], which included these competences but redefined through a focus on *i) communicative competences in verbal, non-verbal and digital format*, which include plurilingual and pluricultural aspects. These may revolve around 'strategic competence; linguistic competence; pragmatic competence —comprising both discourse and functional/actional competence—, and socio-cultural competence —including socio-linguistic— competence' (129); *ii) learning to learn and think, iii) coexistence*; *iv) entrepreneurship*; and *v) self-awareness*.

Regarding *communicative* competences, linguistic, sociolinguistic, and pragmatic descriptors are provided. These parameters articulate the communicative need for an adequate design of whatever didactic unit. Linguistic descriptors include *i)* general linguistic range; *ii*) vocabulary range; *iii)* grammatical accuracy; *iv)* vocabulary control; *v)* phonological control; and *vi)* orthographic control. On the other hand, *sociolinguistic* descriptors would describe sociolinguistic adequacy; and, finally, *pragmatic* descriptors would focus on *i)* pragmatic flexibility; *ii)* turn-taking when communicating; *iii)* thematic development; *iv)* coherence; *v)* propositional precision; and *vi)* spoken fluency. With regard to plurilingual and pluricultural approaches,

> CEFR gives value to cultural and linguistic diversity at the level of the individual. It promotes the need for learners as 'social agents' to draw upon all of their linguistic and cultural resources and experiences in order to fully participate in social and educational contexts, achieving mutual understanding, gaining access to knowledge and in turn further developing their linguistic and cultural repertoire (143).

When it comes to foreign language settings, CEFR does not establish plurilingual mastery as the isolated establishment of the 'ideal native speaker' as the ultimate model per se, but 'the development of a linguistic repertoire in which all linguistic abilities have a place' (143). In the development of such notions, the following ideas are described: *i)* languages are interrelated and interconnected at the level of the individual; *ii)* languages and cultures are not kept in separate mental compartments; *iii)* all language experience and knowledge build up communicative competence; *iv)* the ability to modulate language according to social adequacy is the aim; *v)* linguistic barriers can be overcome when attempting successful communication; *vi)* the intrinsic value of 'otherness'; *vii)* proactive ability and use of languages known to learn new ones to *viii)* act as cultural mediators.

As the current study was based upon a project in the classroom setting of 15-year-old Compulsory Secondary Education (CSE) class in the Basque Country, we are aware its purpose *is intended* to transcend the immediate setting and we acknowledge we also have a will to offer further development to our design and project. Nonetheless, as we primarily locate our project within the immediate setting of a school in the Basque Country, we focused our project on the second stage of CSE within the B1 level of proficiency in English with actual bridging to B2 level, hence not breaching any educational policy.

[1] https://www.coe.int/t/dg4/linguistic/source/framework_en.pdf (5-4-24)

8. Assessment

As Johnson & Johnson (2004) and Álvarez Méndez (2011) claim, competence-based discourse has changed the didactic focus from knowledge related to *what to know* to knowledge related to *knowhow*. In other words, education has changed from *what* to do to *how*. This broadens the scope of education and assessment, for students must be assessed on a dual focus: on the one hand, they must make use of the competence to be autonomous and proactive in analysis, setting of goals, and assessment of results; whereas, on the other hand, the teacher(s) must also evaluate these and the validity of the methods themselves as a means to obtain certain output considering the students' perception of their validity as well as an objective reflection of the learning process.

Such output is dual for the project. Following the criteria of the curriculum established by the Basque Government and the CEFR, when addressing objectives and their evaluation, students shall be assessed considering both the process and final output and the competences attached to them, that is, the proficient use of the adequate linguistic devices to be acquired, the pragmatic and sociolinguistic adequacy of every output produced, and the acquisition of strategies to handle personal and interpersonal communication with oral and written appropriateness, vocabulary management, and valid social competences used; besides due musical competence and performance.

With reference to the different components comprising the project and the tasks involved, assessment is to be carried out considering the efficiency and effectivity the students display to organize teams and structure and manage tasks with due competence to be able to reach the goals established according to their validity and feasibility (Johnson & Johnson, 2004). It also reflected upon the analytical capacity the students display and its evolution from an initial state to a final one both in quality and quantity. As students were to carry out different tasks, how they articulate these, and the quality and quantity of cooperative communication was also assessed as well.

Assessment attempts to evaluate the students' capacity to articulate the learning objectives established, both linguistic and interdisciplinary, and those of the project. Especial attention was to be dedicated to possible pitfalls to encounter, i.e., time constraints, capacity to drift and lose focus, or manage resources efficiently, handle perceived difficulty, motivation, among others, and how the quality of their strategic management to this respect. As Perrenoud (1999, 2004, 2023), Gimeno Sacristán (2011, 2013) and Sanmartí (2007, 2019) correctly analyze, assessment needs to be formative, that is, able to make the student self-regulate and modulate the necessary performances to reach the goals and obtain significative learning. This was paramount at all stages, as it was the students who were to design and perform the project. If successful, motivation would self-sustain for engagement in the activities and a feeling of belonging would arise. As results show, the project was successful when being formative. Consequently, as well, grading assessment met the expectations and peaked compared to that of the traditional curriculum, as performance was motivated and emanated from intrinsic motivation and self-sustained regulated performance and learning out of the students.

Since current criteria at public education in Spain responds to grading from a 0 to 10 with a 5 as the minimum grade for passing, different components of the project were to be graded accordingly to obtain a final grade as a mathematical equation responding to a dual nature: on one hand, the students were to be graded based upon their own individual performance and evolution from their initial state to the final one. On the other hand, collective grading was also to occur, as students were instructed to grade their own performance as individuals, members of a team, and collectively with due regard to final output they accomplished. Finally, the

teacher's assessment was also included to guarantee the students' assessment to be equally fair with respect to that of that given by the students to themselves and the others.

9. Data collection and analysis

The study was conducted between the months of September 2023 and April 2024 spanning across 32 weeks. It included three main parts: *a)* presentation of the project and formation of working dynamics; *b)* composition, production, recording, and airing of song while simultaneously analyzing gender equality and gender-based violence as social phenomena at school; and *c)* data collection, analysis, and elaboration of a scientific paper. Students were divided into an *experimental group* formed by 20 students (N=20), who were to carry out the project; and a *control group* formed by 20 students as well (N=20), who were to follow regular curricular tasks. All groups contained students of the same age.

As CSE curriculum establishes (Eusko Jaurlaritza, 2023), students do not have Music as a compulsory subject in the 4th course of CSE, but optative. Therefore, students do not belong to a canonical class where they would all follow the same subjects. Instead, those students who select Music as a school subject are grouped and assigned to a class. Students follow regular instruction in the class where are assigned and need move to appointed classes whenever they attend an optative course. As a consequence, different optative subjects possess a variable number of students who belong to different natural classes and are treated as a class of their own, regardless of their natural class. A specialist becomes the teacher of every class and different subjects are appointed a different teacher, each being a specialist in the field of knowledge. In terms of academical value regarding the final marks, all subjects possess equal value, regardless of its compulsory or optative nature.

In this case, all forty students who selected the Music course were assigned to two classes with two different teachers. One per class with twenty students each. Therefore, the selection of students might pose a problem if unbalances occurred. The profiles of the students were analyzed and there were no significant imbalances. As their class timetables did coincide but class took place in different rooms, it was possible to carry out the project.

The variables analyzed when selecting the groups were *i) sex* in order to measure gender-based differences and the potential influence in ideology or performance; *ii) musical level or ability* to see the difference in musical skills students have and how it may influence in decision-making moments as high musical ability may influence those with lower ability; and *iii) age* so as to see if age differences may interact with levels of confidence. As student distribution is not something we —as teachers and conductors of the experiment— have control upon as it is a process performed by the School Board, these three variables became the first ones analyzed when initially approaching the selection of students. According to these, no student was excluded.

On a second level of analysis, it was important to select *iv)* what *teacher* was to be assigned the management of the *experimental* or the *control group*. The different teachers involved — two Music teachers and two Language and Literature teachers— decided that, as the Music teachers were not allowed to perform outside the classroom and students appointed by the School Board, the students selected would also include their Music teacher. On the other hand, Language and Literature teachers would participate only in the *experimental group*, as students in the *control group* would follow regular traditional instruction. Whilst students in both groups included students with a variety of musical abilities and were of similar age, there was no potential imbalance.

However, *sex* did include a much higher level of females rather than males. One of the groups included one male (N=1) and 19 females (N=19), whereas the other group three males (N=3) and 17 females (N=17). This may have been an issue but considering *musical ability*, we considered the latter to be more relevant, especially as musical abilities might display greater potential variety. Hence, we considered *musical ability* as the key initial variable for selection and selected the one which included the lowest rate of *initial levelled* students (N=6 vs. N=3), as we considered their low or lacking level may interfere with the performance in the project and affect their perception and motivation. Later measurements of *perceived difficulty* did conform our hypothesis. The *teacher* to be in charge for the *experimental* group, therefore, was also appointed. Regarding their musical abilities, the *control group* displayed six students with *initial level* (N=6), seven with *average level* (N=7), four with *medium level* (N=4), and three with *high level* (N=3). On the other hand, *experimental group* displayed three students with *initial level* (N=3), eleven with *average level* (N=11), two with *medium level* (N=2), and four with *high level* (N=4). It was very important to see the way those with *medium* and *high* abilities was to interact and affect those with *average* and *initial* levels, as we expected those with *initial level* would be positively affected by motivation and perform in a manner in which their level and motivation improved regardless of sex or gender differences. Later tests proved our hypothesis was correct. No student was excluded.

At an initial stage, students of both groups were given some questionnaires to measure their initial levels of motivation, ideology, knowledge regarding gender equality and gender-based violence, and personal information regarding their age, musical proficiency, etc. After setting out the general goals of the projects, data was collected on October 25th, November 29th, January 31st, and March 6th. After that final collection of data, statistical analysis was conducted to analyze the significance of results with SPSS performing parametric —*regression* and *ANOVA* analyses alongside *T-tests* for various variables— and non-parametric tests —a *related-samples Friedman's 2-way analysis of variance by ranks* and an *independent-samples Mann-Whitney test*— to obtain further assurance as for the results obtained through parametric tests, after which a paper was written and formatted according to APA format.

10. Results and discussion

As explained before, the project was elaborated by an *experimental group* comprised of 20 students of 15 years old (N=20). As a contrast, a *control group* performed everyday curricular instruction with equal 20 students of the same age (N=20). All of them are at the fourth course of CSE. The *experimental group* also followed regular curricular instruction as the *control group* did. However, it was the *experimental group* students who carried out the project as it originated there. Therefore, it was very important to make the project successful as much as curriculum fulfilled, for their curriculum is established by the Educational Board and must not be tampered with.

The project analyzed the following variables: *i) group; ii) sex; iii) musical level; iv) pre-perceived difficulty; v) post-perceived difficulty; vi) pre-motivation; vii) post-motivation; viii) perceived impact;* and *ix) final mark.*

10.1. Motivation and impact significantly outwit sex, musical level and difficulty

The model shows a *R* value of .963, which is acceptable. Table 1 shows a regression analysis with *group* as the dependent variable and *sex, musical level, pre-perceived difficulty, post-perceived difficulty, pre-motivation, post-motivation, perceived impact* and *final mark* as predictors. With a *p* value of .000 and 95% confidence interval, results show that *experimental group* obtained better and higher performance results due to *pre-* and *post-motivation* (*p* values

of .024 and .000, respectively) and *perceived impact* (*p* value of .007) affecting students' perception and feeling of belonging with regard to the project and its general goal, which helped them target the project with a clear vision that provided significance and helped obtain high level results throughout the project. In the light of Perrenoud (1999, 2004, 2023), Gimeno Sacristán (2011, 2013) and Sanmartí (2007, 2019), students' self-regulatory modulations focused them to maintain high levels of motivation and performance.

On the other hand, *sex* (*p* value of .492) and *musical level* (p value of .468) played no significant role, which show the there was no significant difference between males and females, though there were imbalances in number (experimental group had 19 females and 1 male, whereas control group had 17 females and 3 males). This displays real cooperative work and no dominance of one sex over the other, as predicted due to self-regulations perceived to be the element driving action (Sanmartí, 2007, 2019). Equally, *pre-perceived difficulty* (*p* value of .120) played no role in the project, which resulted in students facing the project the project and everyday class tasks regardless of the difficulty it may pose. Equally, once finished, *post-perceived difficulty* (p value of .083) shows no effect either, which means students do have an awareness of difficulty being of no key importance when addressing a project with clear objectives. Ultimately, difficulty not being a key factor helped sustain motivation and visions of the impact the project was to have did help the project to become a reality and helped sustain motivation and focus while retaining cooperative workflows and keeping ill-feelings low or non-existent (Railsback, 2002; Sanmartí, 2007, 2019; Pujolàs Maset & Lago Martínez, 2018).

Final mark did not play a role either (*p* value of .836), which shows motivation did not depend upon the obtention of a certain grade, but upon the real objective of the project, that is, raising awareness of gender equality and gender-based violence through a musical composition. Nonetheless, 95% confidence interval values of -.062 and -.076 show that final marks favored those students in the experimental group. Therefore, though there is no statistically significant differentiation, data shows that there is a potential difference in favor of the *experimental group,* while not in the manner in which motivation was affected but in the output. This was also expected as self-regulation of students plays a key role (Sanmartí, 2007, 2019).

Table 1.
ANOVA analysis

Model	t	**Sig.**	**95,0% Confidence Interval for B**	
			Lower Bound	***Upper Bound***
	6.710	.000	1.755	3.288
Sex: 1-Male; 2-Female; 3-Other	.695	.492	-.130	.264
Musical Level: 1-Low; 2-Average; 3-Medium; 4-Advanced	-.736	.468	-.149	.070
Pre-Perceived Difficulty	1.601	.120	-.015	.122
Post-Perceived Difficulty	1.789	.083	-.008	.127
Pre-Motivation	2.377	.024	-.012	-.155
Post-Motivation	-6.060	.000	-.289	-.144
Perceived Impact	-2.887	.007	-.169	-.029
Final Mark	.208	.836	-.062	-.076

10.2. Role of perceived difficulty and impact

Tables 2 and 3 provide T-tests to see if there were statistically significant differences regarding *perceived difficulty* in *pre-* and *post-* stages and mean values. With a *p* value of .503, *pre-perceived difficulty* played no significant role, which means difficulty was not perceived as a key factor for the project. It is closely related to motivation, as shown before. *Experimental*

group shows a mean value of 7.3 as the *perceived difficulty*, whereas *control group* students perceived higher mean value, i.e. 7.5.

At initial stages there is no basic significant difference, but as the project grew and finalized, students' perception did alter. *Experimental group* students show lower mean values of difficulty with a dramatic decrease from initial 7.3 to 5.5. *Control group* students also appreciated the project to be accessible and feasible for them, as the mean values decrease from initial 7.5 to 6.35. With a *p* value of .003 and 95% confidence interval values of -1.39508 and -.30492, statistically significant difference favors the *experimental group* due to their direct implication in the inception, development, and direct knowledge and role in the project, which permitted greater engagement and self-regulation strategies, as our predictions established and previous research shows (Railback, 2002; Sanmartí, 2007, 2019; Gimeno Sacristán, 2011). This confirms our first and second research hypotheses, that is, multi-competential demand provoking higher cognitive, emotional, motivational, academic, and social performance; and increase in meta-awareness and metacognition. Logically, therefore, our third research hypothesis was validated, as students proved to be more proactive in their drive and decision-making regardless of the difficulties that might arise.

Table 2.
Mean values for perceived difficulty

	1-Experimental; 2-Control	**N**	**Mean**	**Std. Deviation**
Pre-Perceived Difficulty	1.00	20	7.3000	.92338
	2.00	20	7.5000	.94591
Post-Perceived Difficulty	1.00	20	5.5000	.76089
	2.00	20	6.3500	.93330

Table 3.
T-test for perceived difficulty

	Sig. (2-tailed)	**95% Confidence Interval of the Difference**	
		Lower	***Upper***
Pre-Perceived Difficulty	.503	-.79837	.39837
Post-Perceived Difficulty	.003	-1.39508	-.30492

Tables 4 and 5 provide T-tests in order to see if there were statistically significant differences regarding *perceived impact* of the project and overall work alongside mean values. With a *p* value of .000, *perceived impact* played a significant role, easily assumed due to the students of the *experimental group* being the creators of the project. They show high mean values of the impact they foresaw with a value of 8.65, whereas those in the *control group* display a mean value of 5.8. This does not mean they saw it was to have a low impact, but it is analyzed as its reason being communication between different teachers may have shown flaws when presenting the project and its various facets. which means difficulty was not perceived as a key factor for the project. As before, 95% confidence interval values of -2.36568 and 3.33432 favor the *experimental group*, which is also very closely related to motivation, validating our predictions in our hypotheses.

Table 4.
Mean values for perceived impact

	1-Experimental; 2-Control	**N**	**Mean**	**Std. Deviation**
Perceived Impact	1.00	20	8.6500	.87509
	2.00	20	5.8000	.61559

Table 5.
T-test for perceived impact

	Sig. (2-tailed)	**95% Confidence Interval of the Difference**	
		Lower	***Upper***
Perceived Impact	.000	-2.36568	-3.33432

As a project regarding gender equality and gender-based violence, it was paramount to analyze whether among and/or within groups there were significant differentiations regarding *sex*, either among students themselves and, above all and most importantly, provoked by school dynamics. There was a thorough analysis in the initial stages and design of the project of this variable, especially as there were imbalances between the number of males and females, as stated before.

However, Table 6 shows a T-test with a *p* value of .304 displaying *sex* did not play a significant role. As previously analyzed, this is interpreted as a clear and conscious act of designing workflows that are cooperative and free of gender-bias so as to favor real cooperation and inclusive behaviors among students and teachers as well. As previously said, self-regulation was expected from students and greater cognitive approach related to self-regulation and behavior modulation towards cooperative attitudes (Railback, 2002; Sanmartí, 2007, 2019; Gimeno Sacristán, 2011). This validated our first and second hypotheses, as greater metacognition and awareness derived in greater efficiency in performance.

Table 6.
T-test for perceived impact

	Sig. (2-tailed)	**95% Confidence Interval of the Difference**	
		Lower	***Upper***
Sex: 1-Male; 2-Female; 3-Other	.304	-.09428	.29428

10.3. The positive effect on final mark and motivation increase

Tables 7 and 8 provide T-tests to see if there were statistically significant differences regarding *final mark*(s) students were to be awarded and the mean values. Though initial ANOVA analysis displayed no statistically significant difference, the T-test does display significant difference (*p* value of .033) mean values of 8.1 regarding the *experimental group* and 7.15 regarding the *control group*. As said before, musical level played no role but motivation did. High motivation and deeper knowledge of the project and working dynamics does pose a dramatic differentiation in final performance with a mean difference of almost 1 point, which is considered to be a serious indicator of the value of the interdisciplinary project and its various personal and academic dynamics. 95% confidence interval values of -.07897 and -1.82103 favor the *experimental group*, which draws us to positively support our conclusions.

Table 7.
Mean values for final mark

	1-Experimental; 2-Control	**N**	**Mean**	**Std. Deviation**
Final Mark	1.00	20	8.1000	1.37267
	2.00	20	7.1500	1.34849

Table 8.
T-test for Final Mark

	Sig. (2-tailed)	**95% Confidence Interval of the Difference**	
		Lower	***Upper***
Final Mark	.033	-.07897	-1.82103

As we knew motivation was to be of uttermost importance for it would enhance performance and students' drive throughout the project, it was treated with caution. It was important to help communication open and to maintain ill-feelings low while retaining illusion and clear final goals, above all, students' and teachers' emotional and affective facets. As shown in Tables 9 and 10 with mean values of *motivation* in *pre-* (*p* value of .025) and *post-* stages (*p* value of .000) and a T-test to show significance of differences, it does display a key role. *Pre-motivation* mean values of 8.00 and 7.3 for the *experimental* and *control group*, respectively, show that *experimental group* did have higher motivation. Nevertheless, a crucial turning point occurred at post-motivation stage once the project was finished. While the *post-motivation* of the *experimental group* peaked at 9.75 mean value, *control group* mean value decreased from initial 7.3 to final 6.75. This is interpreted as the comparatively logical outcome of a project being perceived as attractive, motivational, and with a clear social impact. Whereas *experimental group* carried out the project while, simultaneously committing to their everyday curricular tasks, *control group* students did see the final output and, comparatively, affected their motivation as they may want to take part in it. With regard to this, other students in the control group and other courses have embarked such creative tasks in different projects as well, which shows the role of motivation is key and such projects perceived as attractive and desirable.

Furthermore, the role of those teachers involved in this current project is also perceived as important, for it is them who have traditionally carried out such projects in the history of the school. Thus, students' perception of teachers' commitment to students and projects is also a key value. This is key when validating our 3 research hypotheses, as multi-competential design necessarily involves activities that empower the student to perform academically and socially so as to cause students' greater meta-awareness and metacognition strategies develop. These are to generate greater engagement and self-sustained motivation, which is what derives in greater performance and real significative learning (Slavin, 1983; Railsback, 2002; Perrenoud, 1999, 2004, 2023; Sanmartí, 2007, 2019; Gimeno Sacristán, 2011, 2013).

Table 9.
Mean values for pre- and post- motivation

	1-Experimental; 2-Control	**N**	**Mean**	**Std. Deviation**
Pre-Motivation	1.00	20	8.0000	1.02598
	2.00	20	7.3000	.86450
Post-Motivation	1.00	20	9.7500	.63867
	2.00	20	6.7500	.63867

Table 10.
T-test for pre- and post- motivation

	Sig. (2-tailed)	**95% Confidence Interval of the Difference**	
		Lower	***Upper***
Pre-Motivation	.025	-.09268	-1.30732
Post-Motivation	.000	-2.59115	-3.40885

10.4. Additional support and validation

Further non-parametric tests were carried out in order to check upon the value of the results obtained. Mann-Whitney tests as *related samples* and *non-related samples* were performed. As *related samples*, the test did show a *p* value of .000, which rejected the null hypothesis and helped us consider our results and conclusions to be valid, hence conforming our working hypotheses. As non-related samples, *p* values of .009 for *post-perceived difficulty*; .015 for *pre-*

motivation; .000 for *post-motivation* and *perceived impact*; and .011 for *final mark* show our hypotheses to be considered as valid, while a *p* value of .529 for *pre-perceived difficulty* may show no potential role, it leads us to consider initial perception of *difficulty* as a factor to be considered with caution, due to its role in shaping the initial cognitive framework of the students and affecting motivation.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distributions of PrePerceivedDifficulty, PostMPerceivedDifficulty, PreMotivation, PostMotivation, PerceivedImpact and FinalMark are the same.	Related-Samples Friedman's Two-Way Analysis of Variance by Ranks	,000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of PrePerceivedDifficulty is the same across categories of 1-Experimental; 2-Control.	Independent-Samples Mann-Whitney U Test	,529[1]	Retain the null hypothesis.
2	The distribution of PostMPerceivedDifficulty is the same across categories of 1-Experimental; 2-Control.	Independent-Samples Mann-Whitney U Test	,009[1]	Reject the null hypothesis.
3	The distribution of PreMotivation is the same across categories of 1-Experimental; 2-Control.	Independent-Samples Mann-Whitney U Test	,015[1]	Reject the null hypothesis.
4	The distribution of PostMotivation is the same across categories of 1-Experimental; 2-Control.	Independent-Samples Mann-Whitney U Test	,000[1]	Reject the null hypothesis.
5	The distribution of PerceivedImpact is the same across categories of 1-Experimental; 2-Control.	Independent-Samples Mann-Whitney U Test	,000[1]	Reject the null hypothesis.
6	The distribution of FinalMark is the same across categories of 1-Experimental; 2-Control.	Independent-Samples Mann-Whitney U Test	,011[1]	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

[1]Exact significance is displayed for this test.

Figure 1. Hypothesis Test Summary

11. Conclusions

The interdisciplinary project-based project proved to be successful as far as the acquisition of different objectives targeted and the management of the various competences implied. Students successfully dealt with the different aspects and processes involved in the development of the project, which had to do with the establishment of objectives, design of work systems and correctly deal with human and material resources available. They were also proficient in the decision-making processes and in the effective management of social dynamics. Finally, the

students were able to cope with the limitations they had and encountered in the development of the project, while they were able to assess them correctly and overcome them.

As far as the final output of the project, students were able to make use of the material resources they had available to produce a final version of the project, which focused on the digital competences. In addition, they were able to focus on the learning processes involved and intercultural aspects intertwined in the project with due proactivity and awareness.

Considering initial predictions, our research hypotheses were validated, and students' performance was seen to have been determined by cooperative attitudes which helped them avoid gender bias or competitive aspects which might potentially derive in ill-feelings and frustration. Furthermore, cooperative attitudes were closely fed back by motivation increase and self-regulation of the students. That was paramount as the project proved to be self-sustained and self-motivated and not as a means to a grade (Sanmartí, 2007).

Our first research hypothesis claimed that multi-competential design would favor greater cognitive, emotional, motivational, academical, and social performance of the students. This was validated as results and performance show design provoked students to become active when decision-making, cooperative and not competitive, and focused on the project regardless of the mark they were to finally be given and driven by the significance of their performance and the impact they were to generate at school and in town. This, simultaneously, fed back and forth the third hypothesis, related to the predicted increase in motivation and proactivity.

Closely related to this, as motivation and engagement increased, students' self-regulation did occur, and they were able to obtain greater meta-awareness and metacognition as their reinvested knowledge did help perform with greater complexity. This validated our second hypothesis.

Finally, as for the fourth hypothesis, related to the APA and the knowhow of scientific procedures and statistical analysis, students also managed very well, which fed back previous hypothesis in a circular manner. This is what led to significant learning.

Considering the significance of our study in the field, we consider that results prove cooperative teacher-student and student-student behavior favor greater involvement of students, which also strengthens students' feelings of belonging. On the contrary, traditional instruction locates students in a passive role only demanding content reception and performance on exams. This affects students' motivation, especially intrinsic motivation, as they only act upon academic demand to perform well at exams but does not facilitate decision-making and involvement at social dynamics when any problem arises. Needless to say, students' involvement becomes utopic and as there is no feeling of belonging, students act motivated by their immediate needs, hence neglecting any social dynamic involving cooperation at ulterior levels, necessary when attempting to address gender-based violence, gender equality, or any other social dysfunctional event.

PBL contexts with interdisciplinary approaches and cooperative behaviors do, therefore, offer valid scenarios for students' curricular development as well as invigorating students' belonging to a school by making them social educators and active and equal agents in decision-making spheres. This occurs as students are treated as equals and they drive school dynamics alongside teachers and other school agents. This does not mean traditional instruction has to be abandoned. On the contrary, interlapping dynamics may favor the best of both.

Finally, considering the scarcity of this type of students in Basque and Spanish Educational curriculum, we believe our study may help other scholars and schools attempting to design such projects to obtain valid data to consider when designing their own projects. In our case, when designing further projects, we will do so.

12. Limitations and further lines of research

The project encountered various difficult issues along the way. On the one hand, the establishment of correct cooperative behaviors and working patterns was, certainly, a problem. As students are enrolled in CSE, they did have to follow regular class instruction while, simultaneously, carrying out the project. Nevertheless, such difficulties were successfully dealt with and overcome, which often required redefining timing issues for recording, mixing, and mastering instruments and voices. Equally, the same issues occurred when recording and editing the videoclip. On the other hand, technical difficulties were also an issue to rise up against. It had to do with lack of knowledge, which was due to not having been previously instructed on recording techniques and more advanced content regarding this subject. Additionally, students' very limited knowledge of statistics was potentially a problem, for it might lead to wrong readings and interpretations of data. This was easily solved as adapted explanations of key statistical analysis were given and this posed a minor problem. Nonetheless, students also developed strategies to solve these problems and were able to work efficiently so as to find solutions to the problems with the cooperation and work of the teachers involved as well.

The project covered all basic objectives and we consider it turned out to be a success as it did work on technical grounds related to musical composition and production. What is more, further projects have arisen and are being implemented. Considering the findings of the current study, future lines of projects are related to the analysis of social topics that are a concern for students, such as LGTBIQ+, ecology, intergeneration and links between older generations and younger students, or feminism. Such projects are also interdisciplinary and attempt *i)* the incorporation of more fields of knowledge in such interdisciplinary projects; *ii)* greater depth in technical aspects regarding musical and literary production; *iii)* the design of interdisciplinary projects with cooperative approaches regarding other fields of gender studies and/or literary and musical creation in other formats and ages with further public staging and performances for other schools and people of other ages.

Finally, and in connection with the third hypothesis, i.e., students' greater proactivity and motivation related to decision-making spheres at school and in town, another line of research would deal with the necessary steps to be taken in order to enhance and make the role of children and teenagers be stronger and successful in the decision-making spheres involved at all levels of life in the town. In order to do that, students' participation in whatever social and academic dynamic organized is being promoted by ensuring their participation in core organs of school and Town Hall organizational schemes related to the design of initiatives and/or their implementation. In the light of this, a board of students has been designed at school with the participation of students between the ages of 14-18 as co-tutors of other students or caretakers of other students' psychological and emotional states by cooperatively providing help to the teacher and psychologist at charge and promoting active well-being at school.

Acknowledgements

Due gratefulness need be expressed to the students participating in the creation and production of the project. Although the 3 teachers involved did take part in the arrangements and performance of lyrics, music, and recording processes, the two students who composed the song are to be mentioned. They are the real authors of the project. Additionally, the rest of the students did also have a key role as musicians and their participation deserves due acknowledgement.

On the other hand, due gratefulness must be expressed to the school Principal and Head of Studies for their support and help. Alongside them, the town Councilor of the Culture and

Youth Department and the Mayoress for their assistance and implication in the success of the current project.

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