Response to Reviewer 2 Comments

Dear Editors and Reviewers,

Thank you very much for your positive reaction to our paper and for the positive feedback we received from the reviewers. By following their comments and suggestions, we have improved our original manuscript.

The revised version of our manuscript includes all the suggestions outlined in the reviews. We have highlighted in red all the modifications implemented with respect to the two reports received. We believe that we have been able to address each of the comments raised.

We hope that you and the reviewers will find our manuscript improved as a result of the review process and suitable for publication at “Sustainability”. Of course, we are open to incorporate any further suggestions that you or the reviewers may have.

Thank you again for your valuable comments and suggestions. We look forward to hearing from you.

Yours faithfully,
The authors

Point 1. Research highlights the value of voluntary extracurricular activities in the development of reflections that guide change in the beliefs, attitudes, and daily behaviors of a small sample of university students. Paper shows that educational practices that help students to become aware of the importance of exercising active and responsible citizenship that responds to the sustainability challenges. Any impact indicator of the program based on evidence of personal changes would be of interest to an international audience.

Response:

We are grateful for the comments done, given that effectively in the article we want to emphasize the worth of the university voluntary extracurricular activities in the development of reflections that will lead to changes in the beliefs, attitudes and daily behaviors of university students. In this article we want to explore how extracurricular activities are an interesting way to promote students' awareness of the importance of exercising an active and responsible citizenship that responds to the challenges of sustainability. Participation in an activity such as the one described in this article, which exposes students to a very different society, generates an impact on students that transforms them for the future.

Each of your suggestions is replied/commented below, and the changes have been highlighted in red in the text. When we refer to the line number in which the comment is done, we are referring to the initial version of the manuscript, while the page number refers to the pages in the new uploaded version.
**Point 2.** Beyond the hypothesis contrasts with chi square, it is recommended to provide a greater number of qualitative evidence. A greater emphasis on the quality arguments and life experiences of the students involved would bring more quality to the text.

Response:

To answer this question we have added a few literal statements mentioned by the participants in sub-sections “4.1.1. Class 1: Reflections on different social realities”; “4.1.2. Class 2: Reflections on the work carried out in the projects”; “4.1.4. Class 4: Reflections on the personal meaning of the experience”; “4.1.6. Class 6: Reflections on the lived experience on the border of Ceuta”; “4.2.1. Importance of knowing the projects to develop reflection”; and “4.2.2. Importance of living the experience with peers to develop reflection”.

In subsection “4.1.1. Class 1: Reflections on different social realities” we have included “I’ve become more aware of all reality, of everything. Because before I knew that there was poverty, that there were people on the streets sleeping... but until you see it in real life, you are not aware of the truth, of everything” (Participant 16, group 2).

In subsection “4.1.2. Class 2: Reflections on the work carried out in the projects” we have added “I would extend my stay longer and I would like to spend more time with those children and get to know them better” (Participant 23, Group 2).

In subsection “4.1.4. Class 4: Reflections on the personal meaning of the experience” we have incorporated “I believe that my way of thinking has changed... before I was still more likely to judge people without more, without even knowing them...” (Participant 23, Group 2).

In subsection “4.1.6. Class 6: Reflections on the lived experience on the border of Ceuta” we have included “You realize that children are the future and are living in very bad circumstances... Then... I would guarantee them the things they needed so that they could have a dignified standard of living and have a future. What life can all these children have with such a hard experience on the border, many of them without a family to protect them?” (Participant 21, Group 2).

In subsection “4.2.1. Importance of knowing the projects to develop reflection” we have reinforced the text with the phrase “Visiting the projects so closely, meeting the people who work there dedicating their lives, has made me see my life in a different way...” (Participant 12, Group 1).

In subsection “4.2.2. Importance of living the experience with peers to develop reflection” we have written “It has been crucial for me to share this experience with my colleagues... Seeing them react, being able to contrast what we were each feeling... It has been a brutal experience, and my colleagues have played an important role in not feeling alone...” (Participant 5, Group 1).

On the other hand, and in response to reviewer 1, other quotations from the participants have been added in the “Discussion and Conclusions section”.

**Point 3.** Extracurricular active participation, autonomous activities and self-regulated learning promote reflective capacities, provide solutions to complex situations and develop critical thinking skills in an interesting way to transform life experiences into learning. Please, characterize some obstacles encountered in the development of the experience and make some suggestions for
improvement for the research design and the optimization of the quality of the extracurricular program.

Response:

In relation to the obstacles encountered in the development of the experience, and with respect to the optimization of the quality of the extracurricular program, we have added a few paragraphs after line 477 in the section "5. Discussion and conclusions".

With regard to the second objective, there was a high consensus that the development of reflection was one of the main objectives of the experience. In order to develop their reflective skills, the students highlighted three elements: (1) the importance of participating in social projects (with 42.48% presence in the corpus); (2) the importance of living the experience in a group (with 37.94% presence in the corpus); and (3) the importance of the role of the instructor (with 19.56% in the corpus).

In order for this extracurricular activity to have a greater impact, we consider it interesting to have a better balance between women and men participating in the experience, as well as a greater variety of student profiles. We considered that the inclusion of Engineering or Business Administration students would be of great value for the group. Apparently the proposal of this extracurricular activity has more demand from students of Education, Law, Psychology or Languages, but we consider that other profiles such as Engineering or Business would be enriched by the experience, and could bring other perspectives to the group. Another interesting element would be to reinforce the previous preparation to the experience (studying in depth the projects that are going to be visited, deepening in the socioeconomic reality of Tangier, etc.). Finally, the subsequent accompaniment to the experience would also reinforce the change of beliefs detected, and would help to ensure that it does not remain an isolated experience, and that it is part of a process of developing the competences of university students. The possibility of creating a learning community later on with a monthly or bimonthly meeting and continuing to collaborate with other types of extracurricular experiences in the country of residence also seems to us to be of interest.

On the other hand, we would like to mention some obstacles encountered. Firstly, due to the curricular load of the students, the experience is limited to one week and several students insist on the appropriateness of lengthening the experience. Secondly, many of the participating students do not speak French, which prevents direct interaction with people living in the centres visited. Thirdly, and as we have already mentioned, the experience would have been richer with more varied student profiles (Engineering or Business students, etc.).

Regarding some improvements to be incorporated in the research design, we have added a paragraph after line 497 in the section "5. Discussion and conclusions".

In the study presented, in-depth interviews were conducted with all the participants after the experience. We believe that it would have been interesting to ask the same questions before having lived the experience to see how the answers change before and after the extracurricular activity. On the other hand, we consider that it would be very interesting to interview the students one year after the experience, to see to what extent the impact detected is maintained over time. It would also improve the design of the research if we conducted in-depth interviews with the people in charge of managing the projects in Tangier to find out their perception of the value of this experience. Their opinion about what they see, hear, observe in the students would be of great interest for the improvement of the extracurricular program.
Point 4. It is recommended to include some reference to contemporary literature on life experiences and studies related to the field of higher education. A selection of biographical-narrative narratives showing examples of the acquisition of the aforementioned competences would be desirable to include in the paper.

Response:

Thanks for the remark. To address point 4 and point 5, we have added a new subsection.

In section “3. Methodology”, we had in the initial manuscript four subsections: “3.1. Context”; “3.2. Sample”; “3.3. Data collection procedure”; and “3.4. Data analysis”. We have decided to add a new subsection and structure it as follows: “3.1. Context”; “3.2. Sample”; “3.3. Research tool: in-depth open interviews”; “3.4. Data collection procedure”; and “3.5. Data analysis”.

To respond to this suggestion, we have added the following paragraphs behind line 168.

3.3. Research tool: in-depth open interviews

It is evident the importance of the biographical-narrative approach in the social sciences (Suarez-Ortega, 2016). One of the options we considered for this study was to analyze the journals that the students were writing throughout the experience in Tangier. We consider these journals to be a valuable tool, as they reflect the day-to-day reflections. However, we were aware that many of the written reflections were personal and surely the students did not want them to see the light. Given that the ultimate purpose of research into meaningful life experiences is not merely to understand the experiences people have had, but how their meaning is constructed (Myers, 1997), we decided to conduct in-depth open-ended interviews. As Chawla (1998) pointed out “most recent studies of significant life experiences have been conducted through structured or semi structured interviews” (p. 15). When, thanks to our research, we encourage participants to reflect on their own experience, we are at that moment contributing to a greater sense of authorship of the participants’ lives, and the development and transformation of the participants is reinforced.

Therefore, in order to collect the necessary information, in-depth open interviews were conducted after students had returned from Morocco. Interviewing is a research technique where an individual (interviewer) requests information from another individual or group of individuals (interviewee/s), using a script of questions to obtain data regarding a specific matter [49]. The interviewer also encourages participants to go further by re-wording, re-ordering or clarifying questions. This technique was chosen for the present study as it has proved to be adequate to explore the experiences of participants and the meanings they attribute to them (Tong, Sainsbury & Craig, 2007).

The question script developed for this study was composed of 10 questions, as seen in Table 1. Questions 1 to 7 were developed based on Moussa-Inaty’s [24] Reflection Guiding Questions method. Moussa-Inaty’s research shows the positive effect that certain questions can have in guiding student reflection (see Table 1). Additionally, Consolidated Criteria for Reporting Qualitative Research (COREQ) were also considered when designing the question script (Tong et al., 2007). Through these questions, the primary student reflections from the voluntary extracurricular experience in Tangier were collected.

Questions 8 to 10 sought to assess students’ perceptions of the importance of participating in the extracurricular experience as a way to develop their reflective skills. These questions were designed based on the findings of the literature research, which highlighted elements key to the investigation [6,33]. In addition, in order to guarantee the validity of the interview schedule, it was subjected to an assessment by three experts. Finally, participants were asked questions about their age, course, and grade.
Table 1. Reflection Guiding Questions used in in-depth interviews.

<table>
<thead>
<tr>
<th>Reflection Guiding Questions</th>
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<tbody>
<tr>
<td>1. How has this experience changed your way of thinking?</td>
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<tr>
<td>2. How could this experience change the way you act?</td>
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<tr>
<td>3. What surprised you the most about your experience?</td>
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<td>4. What disappointed you the most about your experience?</td>
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<td>5. If you had a chance to make a change (related to the experience), what would that change be?</td>
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<tr>
<td>6. What might some limitations be?</td>
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<td>7. What do you plan to do further (related to the experience)?</td>
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<td>8. How has participation in social projects promoted your reflection?</td>
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<tr>
<td>9. How has reflection with your peers enriched your own reflection?</td>
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<tr>
<td>10. How has having an instructor enriched your own reflection?</td>
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</table>

In order to respond to the comment in point 4, we have added the four bibliographical references listed below:


Point 5. Data analysis was carried out using software to conduct a descending hierarchical classification and software to conduct a mixed methods analysis. A more detailed characterization of the techniques for collecting qualitative information and the methods of mixed methods used to analyze and triangulate information would be desirable to explain.

Response:

In response to this comment, we proceed to explain more precisely how qualitative information has been obtained, as well as to better explain which method of analysis has been followed. Below are the specific paragraphs introduced from line 183 to address point 5.

[183] 3.4. Data collection procedure

Group 1 data collection was carried out between January 2019 and February 2019 and Group 2 data collection was conducted in June 2019. First of all, researchers contacted students enrolled in the experience and they informed them about the purpose of the study, both verbally and in writing. As they all agreed on participating in the study, students were asked to sign a written informed
consent. Subsequently, interviews were conducted in a climate of confidence and trust, allowing more personal and detailed access the students' experiences. Given the unique nature of each participants experience, in-depth interviews allowed each case to be investigated, and for additional relevant questions to be asked in each individual context [50].

**[line 191]** 3.5. Data analysis

Once the information was obtained, analysis of the information and effective treatment of the data were carried out. In order to provide a more complete picture (Boyd, 2000), a data-analysis triangulation, consisting of the combination of two or more data analysis methods, was carried out (Thurmond, 2001). Specifically, for questions 1 to 7, Iramuteq software (Larruzea, 2019) was used to conduct a descending hierarchical classification (DHC). For questions 8 to 10, MAXQDA software was used to conduct a constant comparison analysis (Leech and Onwuegbuzie, 2007). Results obtained by each type of analysis were then combined at the interpretive level.

*Instrument used to analyze students' primary reflections on their voluntary extracurricular experience in Tangier (questions 1–7).*

In order to carry out a lexical analysis of the reflections expressed in the interviews, Iramuteq software was used to conduct the Reinert method. This analysis proposes that every discourse expresses a system of lexical words (or a group of words) that gives coherence and rationality to what the speaker expresses. The objective of the Iramuteq software algorithm is to perform textual data analysis, through the repetition of lexical footprints (word succession), in order to identify the most frequent lexical words shared by interviewees [51]. (...)

Finally, we have revised the paragraph included in lines 226-228 as follows:

**[line 226]** MAXQDA software was used to carry out a constant comparison analysis of students' perceptions. This type of analysis is commonly used when analyzing qualitative data (Ryan & Bernard, 2000). This software is used in qualitative research for its ability to synthesize, sort and organize information collected with selected instruments, and to present research results [54]. The program organizes and examines information by means of categories formed by a system of codes.

In addition, changes have been made to the summary in order to clarify the type of analysis carried out.

Abstract: The objective of higher education institutions is to integrate reflective learning that contributes to the development of a greater awareness among individuals of the importance of facing the 21st Century's sustainability challenges. This paper analyzes the impact of an extracurricular volunteer activity in Tangier, Morocco, in the development of student reflection at a Spanish university. To this end, two objectives are proposed: (1) to explore the students' primary reflections of the experience, and (2) to analyze students' perceptions of the importance of participating in the experience in order to develop reflective learning. In the study, in-depth interviews were conducted with 23 students who participated in the volunteer activity. Data analysis was carried out using Iramuteq software to conduct a descending hierarchical classification (DHC), and MAXQDA software to conduct a constant comparison analysis. This research highlights the value of voluntary extracurricular activities in the development of reflections that guide change in the beliefs, attitudes, and daily behaviors of students that ultimately result in sustainability. Because of this, not only is it considered essential that students participate in social projects, but also that they undertake these projects with peers and instructors who can create environments of support and trust.
Therefore, to respond to the commentary on point 5, we have added the five bibliographical references listed below:


Point 6. A more detailed description of the tasks and functions assumed by the students in the different projects would be desirable.

Response:

The participants mainly worked on the Dar Al Baraka project in Casa Nazaret. The students offered accompaniment in the daily activities of the people who live in the center and who have special needs. The aim of the accompaniment was to help them establish a day-to-day routine in order to be more autonomous in daily activities such as eating, bathing, dressing, etc. In addition, special importance was given to creating an accompaniment of each volunteer with a specific person from the center, to strengthen the affective bond and help them to improve those skills necessary to integrate into a group and society. To this end, both in the morning and in the afternoon playful tasks are carried out both in the centre and outside it.

In addition, during two mornings they had the opportunity to collaborate with the project Father Lerchundi working on a socio-educational level through school support and accompanying in free time. The task consisted of talking and playing with them, preparing recreational activities, workshops, handicrafts, doing sports, and helping at mealtimes.

During one morning they were also able to visit the Dar Tika project in which the people who work there explained to the participants the reality lived by the girls of the centre. Afterwards, they had time to share, talk with them and learn more about their lives and future goals.

In the same way, the group of volunteers shared all week the household chores. For this, different groups were organized that were in charge of carrying out different domestic tasks such as cooking, cleaning, setting the table, etc.

Finally, the "group one" had the opportunity to go one day to the border where they had the opportunity to learn more about the harsh reality that people who want to migrate in search of better living conditions.
**Point 7.** A greater characterization of previous life experiences and the significant changes experienced in relation to these previous experiences.

Response:

To answer this question we have added the following paragraph (before figure 1):

The percentage of participants who have previous experience in the extra-academic field is high. On the one hand, of the total number of participants in group 1, 10 people had previously participated in ECAs and 3 had not. On the other hand, when referring to group 2, 6 people had previously participated and 4 had not.

With regard to the second remark, there was no specific question raised that would allow us to draw conclusions regarding the value of previous experiences in this particular experience. That is why we have added a phrase in “future lines of research” (line 503).

Further research might explore the content of the individual reflective diaries written by students each night during the extracurricular experience. However, it is feared that informing students of subsequent analysis of their diaries could generate bias in their reflections. A possible hypothesis to be contrasted is whether the fact of having previously participated in extracurricular activities has any impact on the participant's assessment of the new experience and of what nature. Likewise, in-depth interviews conducted both before and after the experience could provide interesting data, as would conducting identical interviews with students who have not participated in the experience, to compare their thoughts and perceptions. Finally, the development of a quantitative longitudinal study, based on a set of students who have the opportunity to live this experience each year, would prove very useful.

**Point 8.** It would be desirable to show some of the main limitations of the study in relation to the small sample used.

Response:

Already in lines 16-18 and 54-58 of the manuscript, we point out that the objectives of the current research are (1) to explore the students’ primary reflections of the experience, and (2) to analyze students’ perceptions of the importance of participating in the experience in order to develop reflective learning.

In that respect, and as noted in lines 492-497 “the study did not seek to generalize results, as quantitative studies do, but rather to explore the impact that participation in ECA has on the development of reflective abilities. The research provides a detailed vision of the reflections extracted by students from a volunteering experience in Tangier, Morocco, and their perceptions of the importance of this experience to the development of their reflective skills. In addition, it adds new perspectives to an area that is increasingly the subject of investigation”.

We are therefore aware that it is not possible to look for meaningful relationships and generalizations from the data, as statistical testing would require a larger sample size to ensure a representative distribution of the target population. Since our objective is eminently exploratory, we have not considered it appropriate to insist further on this limitation.

We hope that the corrections and changes introduced (thanks to all previous comments) will be considered relevant. We believe that the new version has become more robust. However, we look forward to your additional comments, if you consider it appropriate.