In the Face of Uncertainty, Peer-Training: Lessons from a Group Strategy Undertaken by Sociology Faculty During the Pandemic

Ante la incertidumbre, la formación entre pares: lecciones de una estrategia de grupo emprendida por el profesorado de Sociología durante la pandemia

Francisco Castillo-Eslava, Sergio Moldes-Anaya, Nayla Fuster, Mariano Sánchez, Jose María García de Diego y Henar Baldán

Abstract
The training offered to university teaching staff tends to be scant, voluntary and heavily oriented toward novice teachers. With the arrival of Covid-19 and the sudden switch to online teaching, training became an urgent need for teachers. In this context, some faculty members of the University of Granada’s Sociology Department created a multi-cohort faculty peer-training group for collaborative learning in multimodal teaching methods. This paper describes the initiative and analyses the impact of the training on participating faculty members. The authors used a mixed methods research strategy with a sequential approach. Results indicate that training action’s collaborative dynamics contributed to the general well-being of the participants, bringing about a reduction in their feelings of isolation, insecurity and lessening their perception that they lacked the skills required for the new situation. Also, intergenerational differences were detected in the effects the training had on more novice and more experienced teachers.

Keywords
Sociology, peer training, teaching staff, intergenerational, Covid-19.

Resumen
La formación ofrecida al profesorado universitario suele ser escasa, voluntaria y muy orientada a los profesores noveles. Con la llegada de Covid-19 y el cambio repentino a la enseñanza en línea, la formación se convirtió en una necesidad urgente para los profesores. En este contexto, algunos profesores del Departamento de Sociología de la Universidad de Granada crearon un grupo de formación entre pares del profesorado para el aprendizaje colaborativo en métodos de enseñanza multimodal. Este artículo describe la iniciativa y analiza el impacto de la formación en los profesores participantes. Los autores utilizaron una estrategia de investigación de métodos mixtos con un enfoque secuencial. Los resultados indican que la dinámica de colaboración de la acción formativa contribuyó al bienestar general de los participantes, provocando una reducción de sus sentimientos de aislamiento, inseguridad y disminuyendo su percepción de que carecían de las habilidades necesarias para la nueva situación. Asimismo, se detectaron diferencias intergeneracionales en los efectos que la formación tuvo sobre los profesores más noveles y los más experimentados.

Palabras clave

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1. Introduction
The impact of Covid-19 on universities has led to a sudden change in teaching dynamics and has brought with it uncertainty, stress, fear and even feelings of guilt among university faculty (Cunningham, Cunningham, and Boyd, 2021). At the individual level, there have been faculty members who have reacted by attempting to apply whatever digital know-how they might have, using a strategy of trial-and-error. At the institutional level, some universities have dashed to offer training to their teachers in new pedagogical methods or in the use of specific tools, such as software programmes designed to facilitate virtual or semi-virtual teaching. What have been the results of these efforts? Currently little information is available about the impact this training has had on the faculty.

In this context, a number of teachers at the Sociology Department of the University of Granada, in Spain, a faculty group to engage in horizontal, peer-based training — bringing together individuals with different professional profiles in terms of category and seniority. This paper presents and analyses some of the results of this initiative, which shows that times of crisis can lead to a break with the processes and practices usually found in university teaching.

1.1. Faculty Development at Universities
One of the more striking aspects of faculty development programmes is that in such programmes teacher training tends to be overshadowed by research training (DeCesare, 2003). In terms of professional practice, balancing these two tasks can be quite difficult (Rodríguez Espinar, 2020; Tight, 2016). Particularly, because research activity tends to be more highly valued when it comes to evaluating the careers of faculty members (Zabalza, 2009), not just in Spain (Daza and Elías, 2013; Troiano-Gomà et al., 2010) but in the academic sphere in general (Henkel, 2005; Greaves, 2021; Malcolm and Zukas, 2009). In fact, a comparative study on university teaching in Europe concluded that faculty members devote more time to research than they do to teaching (Höhle and Teichler, 2013). The study also showed that preferential dedication to research is more pronounced among more novice faculty.

Furthermore, helping university faculty learn to teach has never been a widespread practice in most European countries (EUA, 2019; ICED, 2014; Rodríguez Espinar, 2020). Generally, when addressing teacher education the point of departure is usually the «erroneous assumption» (Zabalza, 2011) that this academic staff learn to teach by teaching, in other words, it is up to faculty to train themselves based on their own professional experience and their observation of those who taught them (Greaves, 2021). When training does take place — in the form of courses, workshops, seminars — it is usually in the hands of faculty members, of limited duration and participation is low (Blouin and Moss, 2015; Fernández and Medinabeitia, 2020; Rodríguez Espinar, 2020). In Spain, for example, this type of training tends to be voluntary, highly focused on the individual and, in most cases, fragmented and unsystematic (Cruz Tomé, 2000).

It is also worth noting that teacher education is usually aimed mainly at novice teachers, especially doctoral students (Blouin and Moss, 2015). Examples include the one-year seminars for the training and preparation of university teaching assistants in the U.S. (Pelton, 2014); the four-year Israeli model, which entails final evaluation and licensing (Schatz-Oppenheimer, Maskit and Zilbershtrom, 2011); or the Spanish programme for the training of university teaching staff, also four years in length, designed for doctoral students (Rodríguez Espinar, 2020). Teacher education is generally understood not as an
ongoing process but rather as a short period, usually at the beginning of a person’s career, with a highly individual focus and in which teachers develop their skills by means of trial-and-error (Caballero, 2013; Montes and Suárez, 2016). Experimentation strategy that is not exclusive to university teachers (Chadha, 2021).

In the specific case of Spain, faculty development regarding teaching, besides being occasional and not designed for all types of faculty members, seems in recent years to be stagnating. According to Fernández and Medinabeitia (2020), from 2013 to 2019 the number of training initiatives that were focussed on class planning, evaluation and improved teaching skills/accompanying students in the learning process, fell from 55% to 48% while calls for innovative teaching projects fell from 67% to 49%. The tendency seems to be to move toward shorter training activities, such as day-long conferences, and the giving of awards for teaching innovation, which did increase considerably in this period.

Similarly, how teacher training opportunities are received varies considerably, depending on the stage the university teachers are at in their career. While the more novice faculty members view the training positively both in terms of acquiring professional skills and at the emotional level (Meanwell and Kleiner, 2014), more experienced faculty perceive it with a sense of dissatisfaction (Montes and Suárez, 2016). In addition, the fact that such training tends to be designed with novice instructors in mind can cause an unreal «ceiling» sensation (Woolfolk Hoy and Burke-Spero, 2005) in more experienced instructors, who feel that this training would not be very useful to them. In fact, in contrast with novice instructors — for whom the training has a positive impact on self-esteem, anxiety and self-perception of their level of knowledge (Fabriz et al., 2021; Pelton 2014) —, more seasoned instructors can display a certain lack of interest and even resistance to taking part in training that entails learning new teaching dynamics or acquiring tools for e-learning (Hanson, 2009).

However, studies evaluating the impact of different teacher education activities coincide that they have a beneficial effect on the quality of university teaching (Sadler and Reinman, 2018), despite the fact that the training offered is still usually conceived from a vision anchored in self-learning rather than collaborative learning (Cruz Tomé, 2000). As Teräs (2016) points out, though, when it does exist, collaborative training offers the opportunity to create a space in which colleagues can share and reflect on their experiences and impressions regarding teaching (Löfström and Nevgi, 2007; Rienties, Brouwer, and Lygo-Baker, 2013; Chadha, 2021).

1.2. Teacher Education in Times of Crisis

The Covid-19 pandemic changed very suddenly and brusquely the entire scenario of university education. Eighty-five percent of European universities chose, at the time of greatest restrictions, to replace in-person with online teaching and only 3% decided to cancel classes completely (Marinoni, Van’t Land and Trine, 2020). It quickly became apparent that, generally speaking, teachers have very little preparation in the realm of digital technology and online teaching (Dvir and Schatz-Oppenheimer, 2020; Rashid and Singh-Yadav, 2020). Faculty members saw that they, and their students as well, had considerable shortcomings when it came to using technological tools and the need for training in these areas became evident (Sales, Cuevas-Cerveró and Gómez-Hernández 2020; Machnry et al., 2020). The need to improve teaching skills among the faculty became an absolute necessity.
Universities immediately had to set up different courses in which faculty could learn about digital tools for virtual teaching (Adedoyin and Soykan 2020; Kidd and Murray, 2020). Members of the faculty found themselves forced to restructure their subjects and reconceive the evaluation systems (Dvir and Schatz-Oppenheimer, 2020; Hadar et al., 2020; Sales, Cuevas-Cerveró and Gómez-Hernández, 2020), which led to a larger workload and, as a result, an increase in exhaustion, anxiety, fear, insecurity and stress among university teachers (MacIntyre et al., 2020; Marek, Chew, and Wu, 2021).

Additionally, the short training courses that were supposedly going to facilitate a speedy transition from an in-person teaching model to one of virtual or semi-virtual teaching at times ended up overwhelming the teaching staff more than helping it (Kozimor, 2020). Moreover, this training should have covered not just the use of digital tools but also pedagogical approaches that could be helpful in virtual teaching (Greaves, 2021).

The Covid-19 crisis seems to have sparked new interest in teacher education, as indicated by the recent increase in research in this area (Sepulveda-Escobar and Morrison, 2020). Periods of crisis are also times for reflection and an opportunity for development (Rodríguez Espinar, 2020; Smith and Riley, 2012; Zabalza, 2011). Thus, in the current crisis situation brought about by Covid-19, much of the literature has focussed on analysing new challenges and how they can be an opportunity to rethink higher education (Greaves, 2021; Kozimor, 2020; Neuwirth, Jović and Mukherji, 2020; Rashid and Singh-Yadav, 2020; Zawacki-Richter, 2020). However, there are still few studies focussing on the training of university teachers in the present context of Covid-19 (Fabriz et al., 2021), a deficit this paper seeks to mitigate.

1.3. The Initiative of a Sociology Department

In this context, and to contribute to research about effective strategies for training university teaching staff, a group of faculty members in the Sociology Department of the University of Granada (Spain) organised, at the end of 2020, a group-based peer-training initiative to help them respond to the new situation. The entire academic staff of the Sociology Department was invited to participate and finally 21 of them formed a group in which to reflect on, analyse and improve their teaching practices, skills and the way they were tackling pandemic-related contingencies. The group followed a multi-cohort model that put both novice and experienced faculty together in an ambience of dialogue and collaboration amongst peers at a time of urgent demand for them to learn.

This training action sought to address four basic needs that were identified through a process that will be explained below. The needs identified were: (1) to break with the feeling of isolation and being alone whilst finding the best way to adapt to unexpected teaching scenarios such as the current one; (2) to learn to replace the trial-and-error method with the systematic application of methodologies, procedures and tools appropriate for work situations affected by crisis; (3) to make evaluation systems and instruments more flexible in order to respond to the growing heterogeneity of learning situations amongst the students; (4) to gain competence in the combined and efficient use of both technological and non-technological resources in the hybrid teaching forced by the pandemic.

The present study aims to use this case to analyse some potential changes associated with a group-based self-organised training action undertaken by university faculty in a context of crisis due to the expansion of Covid-19.
2. Method and Hypothesis
The research was structured around two stages, one prior to the self-training and one following the self-training, and it took place in an 8-month period, from November 2020 to June 2021.

2.1. First Stage: Qualitative Design
To begin, a two-fold qualitative strategy was used to assess the situation at the outset and decide on the possible content of the training. On the one hand, the participating faculty members individually completed a form in which they specified their needs, existing knowledge and expectations (Annex 1). In addition, each participant built two strategic planning tools: a SWOT matrix (Strengths, Weaknesses, Opportunities, Threats) and a CAME matrix (Correct, Address, Maintain, Exploit) (Hervás et al., 2006; Rúa et al., 2021) (Annex 2). The first tool focussed on the weaknesses and threats of that person’s teaching activity, to be addressed during the training, and also on the strengths and opportunities that could be exploited during this difficult situation; the second tool specified the actions the participants considered most appropriate for correcting the weaknesses, addressing the threats, maintaining the strengths and exploiting the opportunities glimpsed prior to the training.

2.2. Second Stage: Quantitative Design
Studying the contents of the SWOT and CAME matrices made it possible to formulate the following ten hypotheses (H) about possible changes after the designed training intervention had taken place. They were to be tested by means of the quantitative analysis of a pre-post questionnaire (Annex 4):

- H1. Decrease in the subjective feeling of isolation and being alone in the new teaching scenario.
- H2. Decrease in the use of the trial-and-error strategy.
- H3. Reduction of the pessimistic attitude regarding the quality of one’s virtual teaching compared to one’s in-person teaching.
- H4. Increase in the feeling of having the skills to respond to the variability and heterogeneity of the new learning situations.
- H5. Greater competence in effectively combining technological and other types of resources related to virtual and hybrid teaching.
- H6. Greater knowledge of work strategies that are effective in the new teaching scenario.
- H7. Improved capacity to design strategies that promote active participation by students.
- H8. More effective methods for personalised attention and accompaniment of students in contexts of virtual or hybrid teaching.
- H10. Increased need for contact and collaboration with other faculty in the department to share resources and experiences.

In addition, given the varying lengths of the teaching careers of the participating faculty it was decided that attention should also be paid as well to a transversal question: the possible variation in the intervention’s impact on novice faculty members (with up to 4 years of experience in university teaching) as compared to more experienced ones (with 14 or more years of experience in university teaching).
2.3. The Training Action

Table I shows the characteristics of the 21 faculty members participating in the peer-training faculty group:

<table>
<thead>
<tr>
<th>Table I. Faculty participating in the project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SOCIODEMOGRAPHIC AND TEACHING CHARACTERISTICS</strong></td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>25-34 years</td>
</tr>
<tr>
<td>35-44 years</td>
</tr>
<tr>
<td>45-55 years</td>
</tr>
<tr>
<td>Teaching experience (undergrad and/or postgrad level)</td>
</tr>
<tr>
<td>Under 6 years</td>
</tr>
<tr>
<td>Between 6 and 10 years</td>
</tr>
<tr>
<td>Over 10 years</td>
</tr>
</tbody>
</table>

Source: authors.

The training action was structured to facilitate horizontal learning and exchange amongst peers, in the form of a practice community of limited duration (Laksov, 2008) and with a participatory action research approach (Chevalier and Buckle, 2019). Specifically, there were eight 3-hour sessions of virtual training based on a process of mutual assistance, exchange, evaluation, and joint and reflective knowledge-building. The training also involved individual work outside the sessions and time spent in small groups, to prepare the sessions. All together, the training entailed about 50 hours of learning for each participant. The list of contents appears in Annex 3.

2.4. Analysis

In the case of the SWOT and CAME matrices a thematic content analysis was performed, as is appropriate when there is a very well-defined structure of issues in the information gathering tools. The analysis was conducted following standard criteria (Abela, 2002; Herrera, 2018): a process of qualitative inference based on the application of deductive categories and subsequent detection of the presence and frequency of units of meaning in which the themes established by the categories appeared.

As for the pre-post questionnaire, given the lack of normality in the ordinal variables and the small sample size, non-parametric tests were used. All items were examined, one by one, using the Wilcoxon Z-test for related samples. To check for a possible cohort effect in the intervention, specific analyses were conducted separately on the questionnaires of the novice faculty cohort (up to 4 years of experience) and the most experienced faculty cohort (14 or more years of experience). The effect size was calculated and the statistical power threshold was set at the conventional value of 0.8 (Cárdenas and Arancibia, 2016).

3. Results

3.1. Qualitative Analysis

Analysis of the 21 SWOT matrices (M) showed that faculty members perceived, before the training, that the first threat was the feeling of isolation and being alone (H1), and at the same time they ac-
knowledged they had not, up to that time, received sufficient institutional support in the process of switching abruptly to a virtual teaching context as a result of the pandemic:

«Feeling alone and isolated». (M21. Threats)².

«A combination of flexibility without guidance that exponentially multiplied the feeling of being alone» (M13. Threats).

The combined analysis of the SWOT and CAME matrices made it possible to confirm that participating faculty members were open to incorporating and trying out new teaching practices in their classes (H2), while at the same time recognising they had a somewhat negative attitude toward virtual teaching (H3) because it seemed incapable of achieving the levels of quality attained in in-person teaching:


«Lack of confidence in my ability to maintain the high quality of in-person teaching in a virtual setting». (M3. Weaknesses).

The qualitative analysis also identified a concern related to lack of skills and low self-confidence both in dealing with the highly variable and heterogeneous situations generated by the scenario arising from the pandemic (H4) and in combining technological and other types of resources in teaching practices (H5). Yet, at the same time, it is evident that for some participants the handling and use of technologies was viewed as a strength and/or opportunity:

«Insecurity regarding my capabilities in teaching online classes». (M15. Threats).

«Insufficient experience in handling the advanced technological tools to be able to use them in teaching». (M17. Weaknesses).

«Ability to adapt and use new technologies and feeling comfortable in an online setting (thanks to experience in preceding academic year)». (M4. Strengths).

«Multiplication of web-based teaching resources (we now have more videos than ever, more talks, conferences, classes... that we can use in our own classes)». (M9. Opportunities).

In the correcting weaknesses section of the CAME matrix, faculty acknowledged they did not have sufficient teaching methodologies, strategies and/or tools to respond to the new situation of virtual or hybrid teaching (H6). From another point of view, some of the faculty members with more expe-

² When quoting participants, the M (matrix) is accompanied by a number designating the faculty member to whom the quote belongs. A term then appears to indicate the cell of the SWOT or CAME matrix from which the quote was extracted.
experience in virtual teaching perceived that the situation offered them an opportunity to maintain some of its strengths — and in passing take advantage of it for peer learning —:

«[I need to know] How to teach using Google Meet (speaking to an audience compared to speaking before a camera, non-verbal language, how to manage group dynamics in the chat feature, whether I should focus more on practice or more on theory, strategies for holding student attention in an online class, etc.)». (M10. Correcting weaknesses).

«Shortage of accessible tools for online work that are really useful and focussed on university teaching». (M9. Threats).

«Training in online teaching methodologies, how to give an online class. And a great deal of trial-and-error experimentation». (M7. Correcting weaknesses).

The need to learn strategies that would foment active student participation in a virtual or semi-virtual teaching setting (H7) was one of the needs most often repeated in the different sections of the SWOT-CAME matrices; there was considerable concern about the danger of some students being left behind. Interestingly, while some faculty members considered this participation to be a weakness to correct, others perceived it as a strength to be improved:

«Lack of a method and tools to ensure an appropriate level of participation». (M14. Weaknesses).

«Making better use of strategies that promote student participation in the learning-teaching process and help make the classes more dynamic». (M17. Maintaining strengths).

The matrices revealed an almost generalised consensus regarding the flexibility offered by virtual «office hours» for personalised contact with students (H8); they were perceived as one of the primary strategies with which to address the threats that virtual/hybrid teaching was generating, and also to exploit the opportunities that, at the same time, it could create:

«Flexibility in the one-to-one contact with students and the planning of office hours and appointments». (M7. Opportunities).

«Greater flexibility in one-to-one contact (e.g. answering many questions by email, having scheduled office hours for students, but also knowing which students will come for the revision or assistance with the final project [because this kind of online contact requires an appointment] makes it easier to prepare the session)». (M4. Opportunities).

With respect to student evaluation (H9), analysis of the SWOT and CAME matrices showed that participating faculty members did not have an evaluation system adapted to the online teaching mode...
In this initial context, prior to the training, some faculty pointed out that the difficulty caused by the pandemic situation could also be considered an opportunity to generate co-operative dynamics that would foment cohesion and collaboration, which suggested a certain disposition to taking part in a peer-training group. In fact, the need to create spaces for collaboration and knowledge exchange amongst faculty members (H10) was one of the most frequently mentioned in the matrices analysed:

«The possibility of increasing connections and co-operative work with other teachers». (M7. Opportunities).

«Generating more opportunities for feedback among faculty». (M17. Exploiting opportunities).

«With more training, co-operation and by strengthening co-operative work and/or collaborative projects». (M21. Addressing threats).

3.2. Quantitative Analysis
The Wilcoxon tests conducted — Table II — indicated that changes had occurred in some items of the pre-post questionnaire directly related to the hypotheses formulated. Starting with the section about perceptions, and with respect to the feeling of isolation and being alone when it came to adapting to the new hybrid or virtual teaching scenario, significant changes (n= 21 Zt= -3.764 p<.001) are observed in the levels between the pre-training and post-training stages: the reduction of the feeling is evident after participation in the peer-training faculty group (H1). Additionally, the use of trial-and-error, that is, recurring to the method of making changes intuitively to see how they work, has decreased...
since the training, as expected ($n= 21 \ Z_t= -2.744 \ p=.003$) (H2). In parallel, the analysis has revealed a very significant drop in the pessimistic attitude regarding virtual teaching (H3): after the training, faculty members saw a greater possibility of attaining a level of quality in their online teaching similar to the one attained with only in-person teaching ($n= 21 \ Z_t= -3.395 \ p<.001$). A lessening in the feeling of not having the skills to respond adequately to the variability and heterogeneity of the new teaching context also became evident ($n= 21 \ Z_t= -3.779 \ p<.001$) (H4). Lastly, the results of the analysis of this first section of the questionnaire indicate that the intervention is related to a clear increase in the teachers’ confidence that they have the competencies needed to effectively combine technological and other types of resources in their teaching practices ($n= 21 \ Z_t= -2.858 \ p=.002$) (H5).

The second section of the questionnaire had focussed on the possible changes in the basic needs recognised by the participating faculty prior to the intervention. After the training there was a significant drop in the need to learn more about effective work strategies for situations of hybrid or virtual teaching ($n= 21 \ Z_t= -3.479 \ p<.001$), as put forward in hypothesis H6. Likewise, when the training was over fewer participants felt the need to know more about how to achieve, guarantee and increase student participation in situations of crisis, which allows for the confirmation of the hypothesis (H7) ($n= 21 \ Z_t= -2.423 \ p=.007$). Along these lines, significant decreases were also observed in both the need to know effective methods for personalised attention and accompaniment of students during crisis situations ($n= 21 \ Z_t= -2.610 \ p=.005$) (H8) and the need to have a better command of methods with which to evaluate student learning in hybrid and virtual situations ($n= 21 \ Z_t= -2.561 \ p=.005$) (H9). Interestingly, something different occurs in relation to the need for collaboration with other faculty members working in the same area, with a view to sharing resources and experiences (H10): there was no significant reduction in this need ($n= 21 \ Z_t= -1.425 \ p=.077$).
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Table II. Changes in the improvement of teaching practice: contrast between the phase prior to and the phase after the training

<table>
<thead>
<tr>
<th>Variables</th>
<th>BEFORE TRAINING</th>
<th>AFTER TRAINING</th>
<th>WILCOXON TEST</th>
<th>POWER TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>Z-Statistic</td>
<td>p-value</td>
</tr>
<tr>
<td><strong>Perceptions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1: Feeling of isolation and being alone in the face of a new teaching scenario</td>
<td>3.86</td>
<td>1.062</td>
<td>2.00</td>
<td>-3.764</td>
</tr>
<tr>
<td>H2: Improvement strategy based on trial-and-error</td>
<td>3.67</td>
<td>.966</td>
<td>2.71</td>
<td>-2.744</td>
</tr>
<tr>
<td>H3: Pessimistic attitude toward virtual teaching: decrease in quality</td>
<td>3.33</td>
<td>1.354</td>
<td>1.60</td>
<td>-3.395</td>
</tr>
<tr>
<td>H4: Feeling of not having the skills called for by new learning situations</td>
<td>3.43</td>
<td>1.076</td>
<td>1.71</td>
<td>-3.779</td>
</tr>
<tr>
<td>H5: Competence in effectively combining technological and other types of resources</td>
<td>2.57</td>
<td>.926</td>
<td>3.43</td>
<td>-2.838</td>
</tr>
<tr>
<td><strong>Needs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H6: Knowing more effective work strategies in the new teaching scenario</td>
<td>4.48</td>
<td>.814</td>
<td>3.05</td>
<td>-3.479</td>
</tr>
<tr>
<td>H7: Having more knowledge about how to achieve, guarantee and increase student participation</td>
<td>4.52</td>
<td>.814</td>
<td>3.62</td>
<td>-2.423</td>
</tr>
<tr>
<td>H8: Knowing effective methods for personalized attention and accompaniment of students in situations of crisis</td>
<td>4.14</td>
<td>1.062</td>
<td>3.00</td>
<td>-2.610</td>
</tr>
<tr>
<td>H9: Having a good command of methods with which to evaluate student learning in virtual and hybrid teaching situations</td>
<td>4.24</td>
<td>.995</td>
<td>3.14</td>
<td>-2.561</td>
</tr>
<tr>
<td>H10: Collaborating with other faculty in the same area with a view to sharing resources and experiences</td>
<td>4.33</td>
<td>.966</td>
<td>3.76</td>
<td>-1.425</td>
</tr>
</tbody>
</table>

Note: n=21 (pre and post tests). All tests are one-tailed. SD: Standard Deviation; Z Statistic: Wilcoxon signed rank score. Size of effect: d. Power (A.R.E.): 1 – β. In bold, significant values or values higher than the power threshold.

Source: authors.
Table III shows the results of the same comparative signed rank test but this time done separately, not just for each item but rather for two cohorts of participants: that of novice faculty and that of more experienced faculty. Of the ten items analysed — one per hypothesis —, in only three of them did the pre- and post-intervention results indicate a significant impact in both cohorts: less feeling of isolation and being alone in the face of a new teaching scenario (H1), less pessimism regarding virtual teaching and its possible lower quality (H3) and less feeling of not having the skills to respond to the new learning situations (H4). However, in view of the power reached, the significance of the change described can be considered interpretable, for both cohorts studied, only in the case of H1, where the intervention has been found to have a very large impact (d=1.581), in a downward direction in both cohorts on the perception of isolation and being alone in the face of a new teaching scenario to which H1 refers.

In addition, the results indicate that novice teachers experience, after the training and as stated in hypothesis H4, a relevant reduction in the feeling of not having the skills to respond appropriately to the variability and heterogeneity of learning situations arising in the context of Covid-19 (n= 6 Zt= -2.041 p=.021), something that cannot be said in relation to the cohort of experienced teachers.
### Table III. Changes in the improvement of teaching practice: differences between novice and experienced faculty members

<table>
<thead>
<tr>
<th>Variables</th>
<th>BEFORE TRAINING</th>
<th>AFTER TRAINING</th>
<th>NOVICE FACULTY MEMBERS (EXPERIENCE ≤ 4 YEARS)</th>
<th>WILCOXON TEST</th>
<th>EXPERIENCED FACULTY MEMBERS (EXPERIENCE ≥ 14 YEARS)</th>
<th>1 – β</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean novice</td>
<td>Mean exp.</td>
<td>Mean novice</td>
<td>Mean exp.</td>
<td>Z-Statistic novice p-value novice d 1 – β</td>
<td>Z-Statistic exp. p-value exp. d 1 – β</td>
</tr>
<tr>
<td>Perceptions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1: Feeling of isolation and being alone in the face of a new teaching scenario</td>
<td>4.33</td>
<td>3.33</td>
<td>2.83</td>
<td>1.33</td>
<td>-2.041 .021</td>
<td>1.430 .843 -2.060 .020 1.581 .935</td>
</tr>
<tr>
<td>H2: Improvement strategy based on trial-and-error</td>
<td>3.67</td>
<td>3.33</td>
<td>3.00</td>
<td>3.00</td>
<td>-1.414 .785</td>
<td>0.646 .280 -5.35 .297 2.39 .092</td>
</tr>
<tr>
<td>H3: Pessimistic attitude toward virtual teaching: decrease in quality</td>
<td>3.67</td>
<td>3.00</td>
<td>2.00</td>
<td>1.50</td>
<td>-2.041 .021</td>
<td>1.220 .677 -1.841 .033 0.989 .496</td>
</tr>
<tr>
<td>H4: Feeling of not having the skills called for by new learning situations</td>
<td>3.83</td>
<td>3.00</td>
<td>2.17</td>
<td>1.83</td>
<td>-2.041 .021</td>
<td>1.376 .802 -1.841 .033 0.998 .502</td>
</tr>
<tr>
<td>H5: Competence in effectively combining technological and other types of resources</td>
<td>2.83</td>
<td>3.33</td>
<td>3.33</td>
<td>3.33</td>
<td>-1.089 .138</td>
<td>0.408 .167 -1.857 .032 1.117 .593</td>
</tr>
<tr>
<td>Needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H6: Knowing more effective work strategies in the new teaching scenario</td>
<td>4.83</td>
<td>4.33</td>
<td>3.67</td>
<td>3.17</td>
<td>-1.841 .033</td>
<td>0.997 .502 -1.473 .071 0.677 .297</td>
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<tr>
<td>H7: Having more knowledge about how to achieve, guarantee and increase student participation</td>
<td>4.67</td>
<td>4.17</td>
<td>4.00</td>
<td>4.33</td>
<td>-1.633 .051</td>
<td>0.817 .379 -3.78 .353 .142 .074</td>
</tr>
<tr>
<td>H8: Knowing effective methods for personalised attention and accompaniment of students in situations of crisis</td>
<td>4.50</td>
<td>3.67</td>
<td>3.67</td>
<td>3.17</td>
<td>-1.633 .051</td>
<td>0.626 .269 -4.25 .336 .221 .098</td>
</tr>
<tr>
<td>H9: Knowing a good command of methods with which to evaluate student learning in virtual and hybrid teaching situations</td>
<td>4.50</td>
<td>3.83</td>
<td>3.50</td>
<td>3.33</td>
<td>-1.342 .090</td>
<td>0.815 .378 -5.31 .298 .231 .101</td>
</tr>
<tr>
<td>H10: Collaborating with other faculty in the same area with a view to sharing resources and experiences</td>
<td>5.00</td>
<td>4.00</td>
<td>4.17</td>
<td>3.67</td>
<td>-1.633 .051</td>
<td>0.712 .317 .000 .500 .179 .084</td>
</tr>
</tbody>
</table>

Note: n= 6 (pre and post tests). All tests are one-tailed. exp.: experienced faculty members. Size of effect: d. Power (Lehmann): 1 – β. In bold, significant values or values higher than the power threshold. Source: authors.
4. Discussion

This study aims to contribute to research on effective training strategies for university faculty. With this aim in mind a number of faculty members in the Sociology Department of the University of Granada launched a peer-training initiative as a response to the crisis situation resulting from the current coronavirus pandemic.

The general objective of this research was to study the changes in teacher education process associated with a self-organised group training action. The general underlying hypothesis was that the teacher education training strategy applied in this pandemic case would have a positive effect on the improvement of teaching practices amongst the participating faculty.

The results of this experience indicate that in general the group training improved the practices of the faculty taking part in it. The characteristics of the peer-based group training in terms of approach and structure have been shown to be an effective strategy for improvement in a situation of crisis and a high degree of uncertainty.

The training action was based upon hypotheses of change that have been corroborated almost in their entirety. The exception is the hypothesis on the need for collaboration amongst colleagues to facilitate the exchange of resources and experience, since no significant reduction was detected in such need following the training, which means that, despite the process in which they participated, the faculty members feel that this kind of exchange must continue. In this regard, other authors have already mentioned that these relationships between teachers are only effective when they are maintained over time (Keiler et al., 2020).

Both the «decrease in the subjective feeling of isolation and being alone in the face of a new teaching scenario» (H1) and the ‘decrease in the pessimistic attitude toward the quality of one’s virtual teaching as compared to that of in-person teaching’ (H3) are examples of how the training intervention can change the attitude of the participants, despite the necessary and abrupt reformulation of their usual practices as a result of Covid-19. This change is in line with other studies that have detected the positive influence of training on the feeling of isolation and on attitudes toward virtual teaching (Dvir and Schatz-Oppenheimer, 2020; Hadar et al., 2020; MacIntyre et al., 2020; Marek, Chew, and Wu, 2021; Sales, Cuevas-Cerveró, and Gómez-Hernández, 2020).

Teacher education for university faculty has been scant and infrequent (Blouin and Moss, 2015; Fernández and Madinabeitia, 2020; Rodríguez Espinar, 2020), with trial-and-error being widely used as the main strategy to improve teaching practices (Greaves, 2021; EUA, 2019; ICED, 2014; Rodríguez Espinar, 2020; Zabalza, 2011). In contrast, the training methodology described herein — which was processual, group-based, highly practical, self-managed and collaborative — seems to have contributed solid knowledge — as compared to the risk of the trial-and-error method — when it came to deciding how to tackle the new teaching scenario.

The faculty’s initial sensations of not having the skills to respond appropriately to the new learning contexts coincided with those identified in other studies that point out the shortcomings and scant training amongst both faculty and students as regards the use of the digital resources necessary for high-quality online teaching (Dvir and Schatz-Oppenheimer, 2020; MacIntyre et al., 2020; Rashid and Singh-Yadav, 2020; Sales, Cuevas-Cerveró and Gómez-Hernández, 2020). This training intervention, which explicitly targeted such shortcomings, has led to a reduction in those initial sensations (Fabriz et al., 2021).
In addition, the unexpected Covid-19 situation arrived in a context of confirmed reticence toward training in the use of new methodologies or tools, a reticence that has characterised university faculty accustomed to the traditional dynamics of in-person teaching (Hanson, 2009). However, the peer training activity presented here has reduced this reticence somewhat, as participants have acknowledged that their need to learn these new methodologies has grown smaller following the training. In the face of the unexpected burden generated in faculty members by the need to quickly restructure their teaching — and the resulting physical and mental toll (MacIntyre et al., 2020; Marek, Chew, and Wu, 2021) —, the peer-based training, organised as described herein, has clearly been useful.

Also, the impact of training according to seniority — novice or experienced — reduced the feeling of isolation and of being alone in the new teaching scenario for both cohorts. Furthermore, it is safe to say that horizontal and collaborative training processes like the ones implemented can alleviate a sensation that is present in many university teachers’ day-to-day activity, as shown (Filho et al., 2021).

In the case of novice teachers, it has been observed that after receiving the training, as suggested by hypothesis H4, the members of this cohort noted a significant reduction in the feeling of not having the skills to respond appropriately to the variability and heterogeneity of the learning situations associated with the Covid-19 pandemic. The cohort effect seems evident in this case, which leads to the idea that intergenerational training may be especially interesting when the objective is to train faculty members with little teaching experience. This idea goes further than what we have known up to now regarding the impact of training on novice university faculty (Fabriz et al., 2021; Pelton, 2014) and suggests that the intergenerational perspective should be taken into account when organising training programmes for university faculty.

While the results leave some questions unanswered and in need of further research, it is possible to conclude that the self-organised teacher education strategy has had a positive effect on the improvement of teaching practices, in both novice and more experienced faculty.

The primary strengths of the training model analysed are rooted in three interconnected dimensions. The first dimension has to do with the generation of group-centred peer-training dynamics anchored in a training method that is processual and co-operative. The second dimension is the sequential building of the model: the initial analysis of needs, knowledge and expectations was used to design specific contents in a framework of appreciative and reflective evaluation of the process over time. The third dimension has to do with the value placed on resilience; this model’s adaptability has created opportunities to build innovative dynamics in relation to new ongoing training strategies in which intergenerational integration is a strong component. Such strategies have now been implemented in the form of a new teacher education group for the training of novice faculty members.

There are basically two practical implications that follow from this project and may be applicable in international contexts different from that of this research. The first is the importance of moving toward more dynamic, processual and constructive teacher education models. The case analysed exemplifies a dynamic and processual approach of a constructive nature, based on a strategy of inter-peer collaboration. The second implication is the need to promote new training models that are better adapted to the scenarios faced by higher education today, that are able to take advantage even of the circumstances — such as a pandemic — that could appear to be an obstacle to adaptation and change. This case has demonstrated that the contrary is true.
Finally, it must be pointed out that the main limitation of this study is that its results are only preliminary because, although robust statistical tests have been applied, the sample studied consists of the population of just one case. In future research, it would be necessary, for example, to include a higher number of faculty members and other disciplines, along with a longer training action, in order to obtain results with greater external validity, something that is especially relevant in crisis situations such as the one explored herein.

Bibliographic references


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Sales, Dora; Cuevas-Cerveró, Aurora & Gómez-Hernández, José-Antonio (2020): “Perspectives on the Information and Digital Competence of Social Sciences Students and Faculty Before and During Lockdown Due to Covid-19”. Profesional De La Información, 29 (4), 1-20.


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Declaration of interest statement
The Authors declare that there is no conflict of interest.

Appendices
Annex 1 – Initial Questionnaire
Full name:
Category of RTP (Research and Teaching Personnel):
Department:
Faculty in which most of your teaching takes place:
Undergraduate degree programmes in which you teach (name each programme):
Undergraduate classes you teach (name of class, year in degree programme and number of class credits taught):
Master’s degree programmes in which you teach (name each programme):
Master courses in which you teach (name of course/s and number of class credits taught):

1. Which are your real training needs and demands?
2. Have you participated in or are you familiar with any previous research that is relevant to this initiative, whether your own or someone else’s? Please name.
3. What is your previous training, if any, in the area of the training activity proposed?
4. Have you participated in any teacher education activities, innovation projects, pilot experiences or degree evaluation protocols? (Indicate degree and year in each case)
5. Are there any specific topics you would like the peer-training faculty group to address within the framework of its activities and objectives?
6. Thinking about potential results of the peer-training faculty group, what specific outcome/s do you think it would be worthwhile to try to obtain? Think about your answer in terms of transformation and improvement in your teaching practice.
7. In what way do you think the work of the peer-training faculty group could improve your current teaching activity?
8. What type of specific innovation, in your view, is it especially important that the peer-training faculty group achieve?
Annex 2 – SWOT and CAME Matrices

<table>
<thead>
<tr>
<th>SWOT</th>
<th>CAME</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal analysis (me and my work as teacher)</strong></td>
<td><strong>My main WEAKNESSES in November 2020 were:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>My main STRENGTHS in November 2020 were:</strong></td>
</tr>
<tr>
<td><strong>External analysis (the environment in which I do my work)</strong></td>
<td><strong>The main THREATS that I perceived in November 2020 were:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>The main OPPORTUNITIES that I perceived in November 2020 were:</strong></td>
</tr>
</tbody>
</table>

Annex 3 – Contents of Training Programme

**Session 1:**

- Teaching sociology before and during the current crisis situation. Review of some successful national and international initiatives.
- Taking students into consideration in the process of converting/adapting to new scenarios: their experiences, opinions and needs (student representatives will be invited to attend this session to share their points of view).
- Specific lessons that can be drawn and applied to teaching undergraduate and postgraduate courses. Proposal for the implementation of pilot actions related to first-semester classes.
- Creation of a depository for resources and a platform for collaborative efforts made by participants (will contain a forum for asking questions and sharing reflections for the duration of the group).
- Proposal regarding the structure and methodology to be used in data collection and the writing of the two final articles.

**Session 2:**

- Useful resources from the online platform for teaching and student assessment in the hybrid and virtual scenario.
- Application of online resources to the specific demands associated with teaching sociology. How to create the best conditions for maximum participation? Basic protocol.
- Possibilities and procedures for collaboration among faculty members through the university’s online platform.

**Session 3:**

- Creation of a conceptual map of other ways to teach sociology: options along the continuum ‘face to face’ – ‘totally online’.
- Practical cases involving the use of some aspects of hybrid teaching-learning systems in the area of sociology and that can be applied in contingency settings.

**Session 4:**

- Using eXeLearning to design contents and its application in the university’s online platform.
- Making the most of eXeLearning to promote participatory teaching-learning processes.
- Effective ways to approach the practical content of the course syllabus.
Session 5:
• Toolbox of online and offline tools to use in hybrid teaching.
• Creating surveys: Kahoot, Socrative, Mentimeter, Lime Survey, Google forms.
• Sharing documents for synchronous co-operative work: Google drive, Teams.
• Digital blackboards: Lino, Jamboard, Padlet.
• Interactive images, infographics, presentations: Canva, Gennially.
• Mental maps: Mindmeister.
• Creating rubrics: Rubistar.
• Inserting questions in a video: Educaplay (videoquiz).

Session 6:
• The essential interweaving of digital resources and in-person work in the hybrid teaching methodology. Strategies and ideas for creating the best combination of available teaching tools and modes.
• Specific ways to combine, in the teaching of sociology, classroom work and distance work, both synchronous and asynchronous.
• Specific examples applicable to the processes of teaching and student assessment (both theoretical and practical content).

Session 7:
• Teaching and accompanying students during the learning process in crisis situations such as the current one.
• Personalising the teaching-learning process. Special focus on how to ensure attention to diversity and inclusive education in this context.

Session 8:
• Collaboration amongst sociology teachers and classes in a hybrid scenario. Examples now underway and a proposal for system of our own.
• Ways to ensure the continuity, improvement and sustainability of the peer-training faculty group.
• Planning of tasks such as writing of reports and data analysis.
## Annex 4 - Questionnaire

**QUESTIONNAIRE**

Read each statement carefully and place an X on the scale to mark your degree of agreement.

### INFORMATION REGARDING MY CURRENT SITUATION AS A TEACHER

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree</th>
<th>Don’t really agree</th>
<th>Agree some-what</th>
<th>Agree quite a bit</th>
<th>I absolutely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whether or not I am currently giving class, when I think of my situation as a teacher I would say…</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I have a feeling of isolation and being alone when it comes to finding out how to adapt to the new teaching scenario (hybrid or virtual).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External analysis (the environment in which I do my improvement strategy is based on trial-and-error, trying to make changes intuitively to see how they work).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I am not sure I have the skills to respond appropriately to the variability and heterogeneity of learning situations that have suddenly appeared on the scene.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I have the competencies to effectively combine technological and other types of resources in my teaching.</td>
<td></td>
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</tr>
<tr>
<td>My attitude toward virtual teaching is rather pessimistic; I don’t think I will be able to reach the same level of quality as I did with in-person teaching.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### At this time what I need is…

<table>
<thead>
<tr>
<th>Need</th>
<th>Disagree</th>
<th>Don’t really agree</th>
<th>Agree some-what</th>
<th>Agree quite a bit</th>
<th>I absolutely agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>To know more about effective work strategies for virtual and hybrid teaching situations.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>To know more about how to achieve, ensure and increase student participation in virtual and hybrid situations.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>To have contact with other faculty in the department, as a means to share resources and experiences in a collaborative setting.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>To know how to put in place effective methods for personalised attention and accompaniment of students in virtual and hybrid teaching.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To have a better command of methods to assess student learning in virtual and hybrid situations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>