

Tutorial Education Program (TEP-Education): contributions to the teacher training of Cecitec-UECE students

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Abstract

The Tutorial Education Program stands out for its dynamic character, based on the basic principles of teaching, research, and extension. The objective of the present work is to evaluate the contributions of the Tutorial Education Program in Education for the teacher training of students at the Center for Education, Science and Technology of the Inhamuns Region, linked to the State University of Ceará. This study adopts a mixed approach (quanti-qualitative). The data collection instrument used was a structured questionnaire made available via Google Forms. The participants comprised a sample of 26 students consisting of current scholarship holders, former scholarship holders, volunteers, and formed volunteers of the program. An analysis based on descriptive statistics was used for the quantitative stage and content analysis for the qualitative stage. After collecting and analyzing the data, it was highlighted that the Tutorial Education Program in Education, through its extracurricular activities involving teaching, research and extension, had an important contribution to the professional and personal training of students at that institution.

Keywords

teacher education; teaching; tutorial education.

Programa de Educação Tutorial (PET-Educação): contribuições para a formação docente dos alunos do Cecitec-UECE

Resumo

O Programa de Educação Tutorial destaca-se por seu caráter dinâmico, pautado nos princípios básicos de ensino, pesquisa e extensão. O objetivo do presente trabalho é avaliar as contribuições do Programa de Educação Tutorial em Educação para a formação docente dos alunos do Centro de Educação, Ciências e Tecnologia da Região dos Inhamuns, vinculado à Universidade Estadual do Ceará. Este estudo adota uma abordagem do tipo mista (quantitativa-qualitativa). O instrumento de coleta de dados utilizado foi um questionário estruturado disponibilizado via Google Forms. Os participantes compuseram uma amostra de 26 alunos, formada por atuais bolsistas, ex-bolsistas, voluntários e ex-voluntários do programa. Utilizou-se uma análise baseada na estatística descritiva para a etapa quantitativa e análise de conteúdo para a etapa qualitativa. Após a coleta e análise dos dados, foi destacado que o Programa de Educação Tutorial em Educação, por meio das suas atividades extracurriculares envolvendo ensino, pesquisa

e extensão, teve uma importante contribuição na formação profissional e pessoal dos discentes da referida instituição.

Palavras-chave

formação de professores; docência; educação tutorial.

Programa de Educación Tutorial (PET-Educación):**contribuciones para la formación docente de los estudiantes de Cecitec-UECE****Resumen**

El Programa de Educación Tutorial se destaca por su carácter dinámico, basado en los principios básicos de docencia, investigación y extensión. El objetivo del presente trabajo es evaluar las contribuciones del Programa de Educación Tutorial en Educación para la formación docente de los estudiantes del Centro de Educación, Ciencia y Tecnología de la Región de Inhamuns, vinculado a la Universidad Estatal de Ceará. Este estudio adopta un enfoque mixto (cuanti-cualitativo). El instrumento de recolección de datos utilizado fue un cuestionario estructurado disponible a través de Google Forms. Los participantes conformaron una muestra de 26 estudiantes, conformada por becarios actuales, ex becarios, voluntarios y ex voluntarios del programa. Se utilizó un análisis basado en estadística descriptiva para la etapa cuantitativa y análisis de contenido para la etapa cualitativa. Luego de la recolección y análisis de los datos, se destacó que el Programa de Educación Tutorial en Educación, a través de sus actividades extracurriculares de docencia, investigación y extensión, tuvo un importante aporte en la formación profesional y personal de los alumnos de esa institución.

Palabras clave

formación del profesorado; enseñanza; educación tutorial.

1 Introduction

The former director of Coordination for the Improvement of Higher Education Personnel (Capes), Claudio de Moura Castro, through his legal attributions, founded in 1979 the Tutorial Education Program (TEP). Since its beginning, it was called “Special Training Program”, but, after countless changes in its evolution and guidelines, in 2004 it was renamed and started using the current name (CARVALHO *et al.*, 2018; SILVA *et al.*, 2020).

At the present time, the TEP is under the State Secretariat of Higher Education (SESu) and linked to the Ministry of Education (MEC). It is an academic program directed to undergraduate courses that are guided by a tutor aiming to develop activities foreseen in the program. On official documents, TEP includes 842 groups spread over 121 higher education institutions across Brasil (BRASIL, 2016).

According to Peres *et al.* (2014), TEP is distinguished by its dynamic character, based on the basic principles previously mentioned, being, therefore, permeated by a tutorial work full of learning in favor of issues involving diversity. According to Souza and Gomes Júnior (2015), TEP has a great capacity for progress in the quality of the university courses, as well as on the impact of development and improvement of the professionals in the workplace.

Based on this panorama, the PET group of the State University of Ceará (UECE) in Tauá (Center for Education, Science, and Technology of the Inhamuns Region - Cecitec) emerged in 2018. However, it is worth highlighting that this group is institutional, therefore, created and funded by the UECE itself, and not by the MEC.

The initial goals, defined between the tutor and the scholarship holders, were linked to the environment, which was the reason why the members suggested the name “TEP-Environmental Education”. However, after reflections and debates, it was possible to perceive that the field of action is broader and the name “TEP-Education” translates more accurately the activities of the group, starting projects and activities that include teaching, research, and extension.

Concerning undergraduate courses and teacher training, it is possible to notice that those areas face many difficulties and challenges since they often limit their knowledge to subjects covered in the classroom, in other words, they focus on the specific areas of each discipline. Therefore, they do not adopt another way to enable greater engagement of students in various activities that require teaching, research, and extension, thus, they are stuck to constitute themselves as mere deposits of knowledge (SANTOS, 2019). In this sense, engaging in scientific development programs, teaching, workshops, seminars, etc. promotes a range of opportunities that allows access to other knowledge intrinsic to the profession (SILVA *et al.*, 2017).

It is noticeable that we live in an often traditional educational model, however new ways of expanding the methodologies in higher education are emerging. In this perspective, TEP is highlighted, working with the pillars that guide universities such as teaching, research, and extension. Therefore, it is fundamental to have it as a method and strategy in the construction of efficient pedagogical practices that can successfully improve the quality of teaching in the university environment. Thus, this study seeks to

evaluate the contributions of TEP- Education to the teaching education of Cecitec-UECE students.

Initially, we conducted literature research about correlated works to delimit the object of study. In those research, the used databases were the following: Capes Periodical Portal; Capes Theses and Dissertations Catalog; and Education Resources Information Center (ERIC). The descriptors used were “Programa de Educação Tutorial”; “Cecitec”; “formação docente”; and “formação inicial de professores”. On the ERIC database, the words were translated into English. We selected works between 2012 and 2020 because it was the period when the number of TEP groups was already basically the same as in current times. Another criterion was the selection of only peer-reviewed papers. In total, seven correlated works were selected after cross-referencing descriptors and filtering. Those works were the base both for delimiting the object of study as well as the theoretical basis of the discussions.

As the main conclusion, it is possible to notice the possibility of a broad teacher training, according to the report of those who participated in the group. The details of the methodology and the recorded impressions will be described in the following section.

2 Methodology

The research was made at Cecitec, campus Reitor Paulo Petrola, in the city of Tauá, state of Ceará, located in the Inhamuns region. The campus has three undergraduate courses: Biological Sciences, Chemistry, and Pedagogy. All of which have classes in the morning, after, and evening.

The approach of the research used in the present study is of mixed type (quantitative-qualitative). According to Galvão, Pluye, and Ricarte (2018), the quanti-qualitative research starts with the quantitative approach followed by the qualitative step. Thus, the qualitative results are directed to interpret or explain the quantitative results.

The participants of this study consist of 26 subjects: the current scholarship holders, former scholarship holders, volunteers, and former volunteers of TEP-Education.

The structured questionnaire was made with the participants via Google Forms. The questionnaire was sent individually via e-mail and WhatsApp. The questionnaire had two sections: the first included the informed consent form and the

participant's agreement or not to participate in the research; the second contained objective and discursive questions aiming to collect information about the subjects' academic background.

This research was made in accordance with Resolution number 466 from December 12, 2012, which addresses the respect for human dignity and special protection of the participants concerning participation in scientific studies. Besides that, we provided an informed consent form. Thus, all the subjects only participated in the research after they were fully aware of and signed it.

That being said, the research form opted to preserve the identity of the members. In other words, the words of the discursive answers were identified between TEP-Member 1 and TEP-Member 26. This anonymity allowed greater freedom of expression and decision by the students.

After data collection, the information was presented/organized in charts and/or tables for the interpretation and discussion of the results, at the same time that we used the ideas of the authors included in the theoretical framework to, likewise, interpret and discuss the results. To achieve that, we used descriptive statistical analysis for the quantitative stage and content analysis for the qualitative stage to better collect, organize, describe, interpret, and discuss the data referring to both procedures.

3 Results and discussions

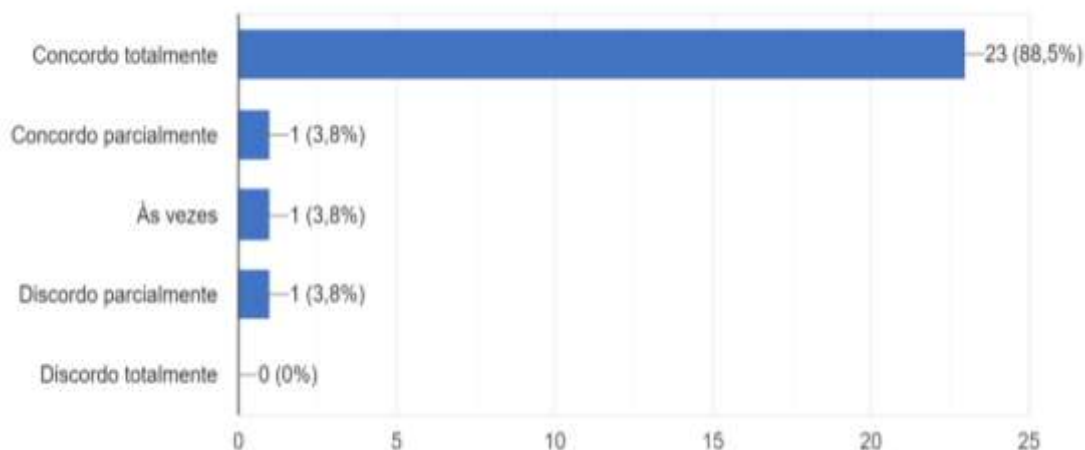
The questionnaire was sent to 33 participants, this amount represents the number of people that have been part of TEP-Education at some point, either as scholarship holders or volunteers, but we received 26 responses. All the discursive responses were analyzed but the ones with the most general responses were highlighted in order to make the students' reports more objective.

The TEP-Education is an interdisciplinary group consisting of Biology, Chemistry, and Pedagogy students since those are the only courses at the center. Besides that, it is worth highlighting that all the members are related to different semesters of the undergraduate courses. Therefore, they can provide different views of the activities that encompass teaching, research, and extension.

Regarding the opportunities for teachers' professional development (Chart 1), 88,5% (23 responses) of the students strongly agreed with the fact that TEP-Education is a determining factor for the professional improvement; besides that, 3,8% (one response) answered that they partially agreed; 3,8% (one response) answered sometimes; and 3,8% (one response) partially disagreed.

Chart 1 – Does the TEP-Education provide improvement in teacher training?

26 respostas



Source: Elaborated by the authors (2022).

The activities developed by TEP provide its students with the real contexts of teaching experience and work environment and also allows greater resourcefulness in the process of communicating with other people (BRITO *et al.*, 2018). This allows acquiring competencies to develop different teaching and learning strategies, making them differentiated and qualified professionals.

The performance of the TEP students in the undergraduate courses is a fundamental factor in the permanence of the program because they are required to have minimum grades of 6.0 and to have no more than one failure in their subjects. In this regard, from the student's point of view, this might become a challenging aspect, since it will allow the student to be more committed to his education and, at the same time, engaged in the execution of the TEP's activities and projects. However, from some tutors' and even some students' points of view, this becomes a reason for concern because, as they advance in their subjects, they will gradually become harder. Thus, this requires greater dedication to study for the students, who need to fulfill their weekly 12-hour workload of activities of the scholarship.

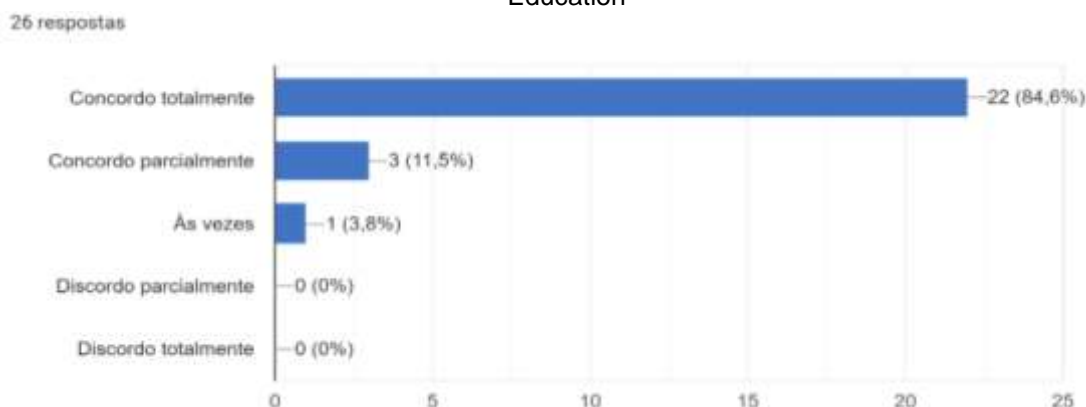
According to Paschoal *et al.* (2018), TEP is of fundamental importance in teacher training since the diversity of everyday situations promotes, to some extent, the distinction between theoretical knowledge and practical knowledge and, at the same time, constitutes the teacher identity. This identity is established based on the individuals' historical and social conditions.

TEP is essential in its members' teaching training since it is in the collective that the diversity of situations happens, thus enabling an improvement in their training. Thus, it promotes the distinction and integration between the theoretical and practical knowledge that constitute the teaching identity, which is built not only within the academic sphere but also based on the subjects' historical and social conditions. The commitment shown by TEP scholarship holders and volunteers is not only academic and professional but also has ethical and social aspects (FLEITH; COSTA JÚNIOR; ALENCAR, 2012).

In the end, TEP encompasses more than other university programs since the activities developed by the scholars involve more fields of knowledge and are more directed at the planning and execution of extracurricular activities. Thus, it is possible to reveal the importance of this type of activity which allows TEP to have a strong influence on the preparation of young people for the labor market and for different interpersonal relationships.

Concerning the development of works, projects, or activities (Chart 2), 84,6% (22 responses) of the members determined that totally agreed; 11,5% (three responses) stated to partially agree; and only 3,8% (one response) answered sometimes. Therefore, it is possible to claim that TEP-Education holds such properties.

Chart 2 – Development of works, projects or activities of teaching, research and extension by TEP-Education



Source: Elaborated by the authors (2022).

Knowing that one of the characteristics proposed by TEP is the idea linked to the inseparability between teaching, research, and extension, in other words, essential pillars that guide the university, in addition to the idea of mentoring, which characterizes being a fundamental divisor in the academic training of undergraduates, it is worth highlighting the activities performed by the TEP-Education group involving this tripod necessary for the professional and personal training of these students. It is possible to notice that, when there is an investment in training activities similar to TEP, there are many effects to the undergraduates' professional development including group learning, through experiences in teaching, research, and extension (FEITOSA; DIAS, 2019).

That being said, TEP-Education has already developed several works involving this academic triad. It is important to highlight that those activities allow students job opportunities in areas where the field is scarce, so it is necessary to seek qualifications due to these difficulties because it is through these that skills and abilities are improved.

Therefore, the activities and/or projects already elaborated by TEP-Education related to teaching, research, and extension were fundamental in the scholarship holders' process of personal and professional growth. That said, this university tripod is important in the teaching and learning process at the university. Therefore, they need to be completely interconnected and deserve equality in higher education.

From the conception that the idea of mentoring is a fundamental pedagogical practice, the program aims to work those three university fronts, seeking to improve the quality of the formation of these students in Brazilian higher education institutions, promoting a formation that is much richer than the strictly academic one. Besides that, all the participants of the program have chances to participate in training courses, scientific research, extension activities, and encouragement to pursue master's and doctoral degrees, aiming at the preparation for teaching practice.

From this assumption, the research activities produced by TEP-Education are mainly framed in participating in events such as University Week, Cecitec's Educational Week, TEP Groups National Meeting in Natal, events in which several works produced by the group are presented, besides the development, production, and exhibition of short films.

An outstanding fact of the research activities is that, in 2021, due to the new coronavirus pandemic, the research production culminated in the elaboration of identifying and analyzing the impact the pandemic brought to education in state schools in Tauá from remote teaching. It is worth highlighting that those activities were presented at XXVI University Week this same year in Fortaleza, yet remotely.

Activities and/or teaching projects that had a great impact on the trajectory of the students were the Organization of the Ceará Meeting of TEP Groups (Encepnet), in 2019, and book publishing. In the book *TEP 40 years of teaching, research, and extension*, we talked about the countless activities and projects related to teaching, research, and extension from all over Brazil. The book *Practices of environmental education* addresses various appropriate behaviors regarding environmental preservation and education. Books such as *Professions Fair and Biological Sciences: 40 years in Brazil* had a great contribution to the teacher training processes.

In the first semester of 2022, an e-book will be published with the theme “Essential knowledge for teaching”. The book will cover numerous subjects, such as inclusive education, safety notions for laboratory practice, the scientific method, digital technologies in education, how to plan a field class, and more.

Brito (2018) states that the publication not only contributes to the dissemination of knowledge but also stimulates students to seek innovations in the research, besides making important contributions to the student’s Lattes resume.

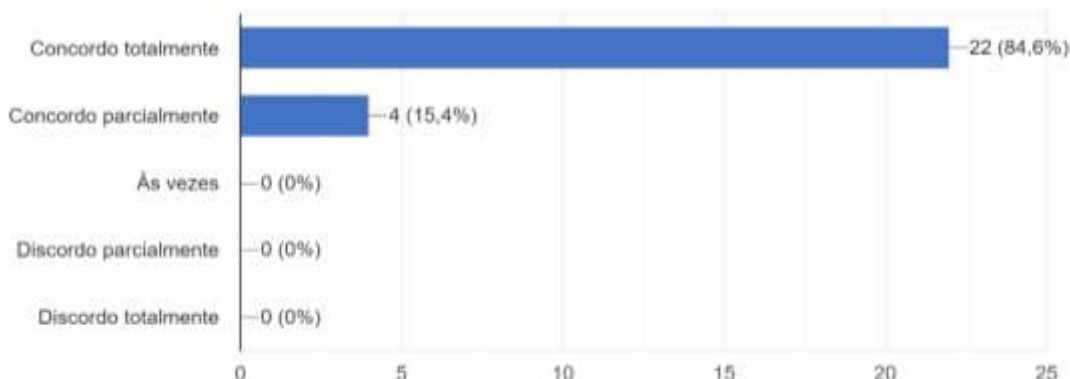
In this context, the projects elaborated by TEP-Education concerning extension aim to stimulate the students’ participation in the community, since it improves their understanding of the social reality they live in. Therefore, some of the projects developed by the group were: Lights, Camera, and Knowledge; Producing Films and Knowledge; A Day at UECE; TEP-Hug; the recording of an Awareness Campaign about Gender Equality; and the organization of the lecture “How to deal with illness or loss of loved ones”.

Carvalho *et al.* (2018) assert that the general principles that guide the extensionist actions of the program cause a positive-transformative impact, interdisciplinarity, and indissociability between teaching, research, and extension. In allusion to the development of teaching methods and strategies (Chart 3), 84.6% (22

responses) of the members totally agreed, while 15.4% (four responses) partially agreed that TEP-Education develops such attributes.

Chart 3 – Is there a development of teaching methods and strategies by TEP-Education?

26 respostas



Source: Elaborated by the authors (2022).

Since one of the goals of the program is exactly the formulation of new strategies and the modernization of higher education, its inclusion in the curriculum of universities around the country becomes crucial, since it provides a high technical qualification to the students, awakening their interest in teaching, which is favorable to their learning.

Complementing the data on Chart 3, we clarify that the students were asked about the influence of the program on their teacher training. It is worth highlighting some of the responses to better explain the experiences of the respondents of the group aiming at their preparation for the exercise of teaching. Below are the accounts of some of the respondents.

[...] TEP has a very relevant role in the development of teaching methodologies and this surely influenced our professional training. I can highlight that TEP acts very well in this improvement of teaching practice, mainly in the qualification for the daily routine of the classroom, either with the search for new teaching methodologies, or in the elaboration of lectures and academic events, or in the complementation of directed studies related to teaching or didactic approach. (TEP-Member 6).

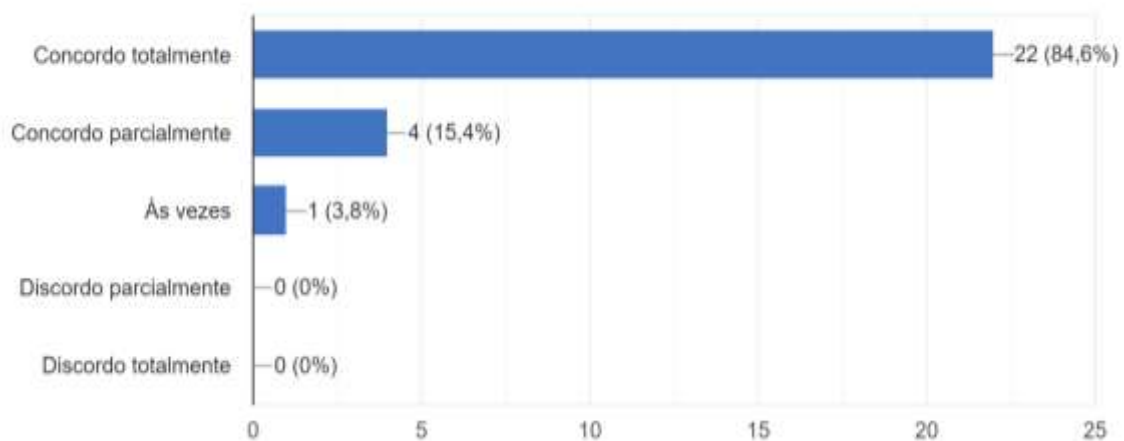
[...] Absolutely, because, through these modern technologies, it is possible to develop the classroom activities in a more dynamic and contemporary way according to the current reality, and this contributes a lot for the students' learning. (TEP-Member 13).

Furthermore, another important reference concerns its contribution to all levels of education, from early childhood to higher education. According to TEP-Member 1: “*I could think of ways of using alternative methodologies in my practice, such as, for example, the use of educational software in early childhood education and in the first years of elementary school*”. While TEP-Member 22 said: “[...] *The project showed me different strategies that I can use freely in the classroom. Actions that work citizenry, respect, love, and empathy for others*”.

When asked about the contributions of TEP-Education during the pandemic (Chart 4), 84,6% (22 responses) totally agreed, while 14,4% (four responses) and 3,8% (one response) partially agreed and sometimes, respectively. Therefore, they agreed that TEP was crucial for this new teaching reality during the pandemic.

Chart 4 – Were the contributions of TEP-Education important for this new teaching reality during the COVID-19 pandemic?

26 respostas



Source: Elaborated by the authors (2022).

TEP-Member 21 wrote the following report concerning the role of TEP during the pandemic:

[...] When you relate the role of the project and its importance linked to the current moment we are living, the TEP program has a great influence on our practice. Those who participated became more humane professionals with a broader view of reality. These aspects are directly linked to the way we communicate with our students, which helps us build our character as education professionals.

It is undeniable that, though not being prepared for a new way of teaching, that is, remotely, and even though not having an undergraduate education that promotes a

contribution in relation to the subject, from the above report, we can see that the training that this project makes possible manages to fill, in some way, this gap related to new teaching methodologies brought by the pandemic.

From this approach, TEP-Education has a proposal of offering students a more humanistic and integral training, based on the principles that guide the university, such as teaching, research, and extension. That being said, we listed the main motivations that led students to participate in the program (Table 1).

Table 1 – Main motivations that led you to be part of TEP-Education

Expand or improve my career opportunities	20 (76,9%)
Book writing	16 (61,5%)
Scholarship remuneration	16 (61,5%)
Promote my personal development	16 (61,5%)
Improve my resume	15 (57,7%)
Develop projects and activities related to teaching, research, and extension	15 (57,7%)
Presentation of works in workshops, congresses, events, etc.	14 (53,8%)
Improve or develop teaching methods or strategies	14 (53,8%)

Source: Elaborated by the authors (2022).

From this analysis, we listed ten thematic nuclei mentioned at least once by the members, in which most of those had more than one answer cited. This allows us to emphasize that, in the participants' conception, the TEP-Education of Cecitec/UECE helps in the development of aspects related to the valorization of professional and personal life. As highlighted by Fleith, Costa Júnior, and Alencar (2012), we should also develop analyses on the short and long-term effects of TEP in the lives of those thousands who were part of it at some point in their academic trajectories.

It is pertinent to state that the total commitment to TEP-Education linked to the training course has been making possible a wide range of academic experiences, with a focus on group work and systematic interaction between the scholarship holders and society.

The idea of mentoring works with the possibility of developing activities or projects that favor the students' learning experiences, reinforcing their role as the main subject of education. From this perspective, it is unquestionable that TEP provides the student with the production of knowledge, enhancement of individual and collective skills, and overcoming of difficulties that professional and personal training requires.

Melo Filho (2019) states that mentoring is grounded and consolidated by the possibility of creating learning experiences and knowledge production, justified by collectively elaborating opportunities for teachers and students in projects that integrate the three pillars of higher education in Brazil.

4 Closing remarks

It was possible to conclude that TEP-Education has a positive impact on the professional insertion and construction of the students of Cecitec/UECE. Furthermore, the program also helps to improve aspects related to the personal life of its members.

According to what was exposed, we can state that the activities developed by this group allow students to understand reality through teaching, research, and extension strategies, besides understanding the important debates of social life that are still in the undergraduate level, enabling the indissociability between theory and practice.

Although TEP is not a mandatory activity in the undergraduate courses, all members are aware of the fact that their participation is a differential for their academic and professional careers, being able to provide them with advantages for entering graduate courses, such as master's and doctorate, besides giving them a better preparation for their professional careers in facing the challenges of everyday life. This difference can only be achieved when the indissociability between teaching, research, and extension is fostered.

It is important to emphasize that it was not our intention to exhaust the presented theme, in other words, we are aware of the limitations of this work. However, it is also worth mentioning that the observations made serve as a starting point for further studies.

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