

Teachers preparation based on professional orientation: characterization at the Pre-University Institute of Exact Sciences of Pinar del Río

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ABSTRACT

The preparation of teachers constitutes an essential aspect for the improvement of professional performance. On the other hand, professional guidance is a priority, recognized in the documents of the Communist Party of Cuba and the Ministry of Education. The objective of this article is to characterize the current state of teacher preparation for professional orientation towards science careers, at the “Federico Engels” Vocational Pre-University Institute of Exact Sciences in Pinar del Río. Theoretical and empirical methods were used, which showed results that reveal inadequacies in this process, which has an impact on multiple aspects.

Keywords: Preparation; Teacher preparation; Professional orientation; Educational orientation

Introduction

At the present time of Cuba, the continuous professional formation of the educational ones, is a process of strategic priority to guarantee the social sustainability. To solve with success the professional problems in the professional acting that you to complicate with

the technological transformations and the challenges of the economic and social development, emerges like a necessity to continue looking for the roads for the improvement of the educational preparation in function of the I execute of its social responsibility. Echeverría and Martínez (2021).

At the present time the demands of the Calendar 2030 and the Objectives of Sustainable Development (ODS), they transcend to the educational environment, when making marked emphasis in the achievement of an education of quality that allows to offer opportunities for all (Economic Commission for Latin America and the Caribbean (ECLAC), 2018)

In numerous international organisms and events of diverse nature, it is recognized that the education is a right of all the human beings, at the same time that a very fundamental one and an indispensable strategy for the social development.

Under these conditions, the educational ones should possess an integral preparation that allows them to complete their professional list, with emphasis in the formation of values; it is for it that you/they should take conscience of their pedagogic duties and to develop bigger levels of commitment and identification with their profession, to tone with the current demands that emerge of the current context.

According to Taquechel-Román *et al.* (2020) they are multiple the challenges of diverse nature that are presented to the educational ones, mediated by the complexity of the Cuban partner-historical context.

From the own genesis of the Cuban revolutionary process, the education and the preparation of the educational ones they have constituted aspects that have been prioritized; as form of guaranteeing the improvement in the relevancy of the educational processes and the achievement of the objectives defined in the society. This demands that the administration of the educational ones, be coherent with the necessary transformations to give execute to the emanated functions of the exercise of the profession.

The above-mentioned unites to the objectives that it pursues the Third Improvement of the National System of Education this way, where in the case peculiar of the professor of the pre-university level in Cuba, from an administration based on the science and the innovation, it should be responsible for possessing a high educational preparation to elevate the quality of its professional acting (Martínez-Pedraza, 2022).

The administration of the professional orientation, is an essential element to give execution to the social responsibility of the IPVCE; because they are them the centers where they feel the bases for the scientific and technological development of the country.

In consequence, it is responsibility of each educational entity in union of the other implied factors; of negotiating preparation system to satisfy the necessities of her.

The approaches are shared of you would Darias, Breijo & Lazo (2024) that consider that the process of continuous formation of the educational one, it should be conceived as a profesionalization process that lapses from the initial formation, the preparation for the employment and the pos-degree formation; and that it is guided to form and to develop ways of professional performance, coherent with the demands of the pattern of acting socially built professional.

For they should be used it methodologies and creative and innovative strategies, to mobilize the learning based on problems, in favor of developing professional competitions (Granados *et al.*, 2020)

Starting from the above-mentioned, it is defined as objective of this article: to characterize the current state of the preparation of the professors for the professional orientation in the IPVCE “Federico Engels” of Pinar del Río.

Development

To give execution before to the objective enunciated, one worked with the whole population of professors of Sciences, students of 12mo grade and officials implied in this process in the IPVCE Federico Engels.

To characterize the initial state of the variable methods and empiric instruments they were applied (Table 1).

Table 1. The population's selection and groups show them

Instruments	<u>Strata</u>	People	Shows	Fr (%)
Analysis guide of the content	Documents rectors	10	10	100
<u>Teachers</u> interviews	<u>Teachers</u> of Sciences	15	15	100
<u>Students</u> interviews	Students of 12 grade	93	93	100
<u>Officials</u> interviews	Implied officials	32	32	100

Legend. *Fr*: Relative frequency, in percentage

They guide the investigation the following methods that leave of assuming as general method the dialectical-materialistic one that allowed the study of the object like a process, the determination of their components and the main dialectical relationships among them, as well as their contradictions and the foundation. On the base of this, the following theoretical methods were used:

The historical-logical analysis, to reveal the main characteristics of the process of preparation of the educational ones for the professional orientation toward careers of sciences in the level pre-university in general and in particular in the IPVCE.

The model, to make the necessary abstractions, to base the preparation strategy and to design the actions of this.

The systemic-structural one, jointly to the model, to determine the essential components for the elaboration of the preparation strategy.

As procedures of the logical thought the analysis and the synthesis, the induction and deduction, the abstraction and generalization were used.

They were used as methods of the empiric level:

The documental analysis, to know from the consultation and analysis of the normative documents the form in that one conceives and the process of preparation of the educational ones is developed in the professional orientation toward careers of sciences in the IPVCE Federico Engels of Pinar del Río.

The interview, through a guide, to officials that impact in the process that is studied (directive of the center, officials, methodological teams), with the objective of describing how the process is developed that is studied.

The survey, by means of questionnaire, carried out to the educational of the area of Sciences of the IPVCE of Pinar del Río, with the purpose of characterizing from the perception of the professors of Sciences, the current state of the preparation of the educational ones in the professional orientation.

The interview to students of 12mo grade, with the objective of verifying the information that these they possess on this important educational process.

After the application of these methods, the following results were verified:

- It is identified to the preparation of the educational ones in the professional orientation toward the careers of sciences in the IPVCE “Federico Engels” of Pinar del Río, as variable. The approaches of Álvarez of Zayas have been assumed (1999) who considers that the training and the improvement, they are the process and the result of forming the potentialities for the pedagogic professional acting, in the work with the professional problems.

- In this sense, the identified dimensions that in turn were evaluated by means of a group of indicators they are:

Dimension I. preparation of the educational ones in the professional orientation toward the careers of sciences in the IPVCE “Federico Engels” of Pinar del Río, like process. Expert as system of activities (labor training, car preparation, educational-methodological preparation and of scientific-methodological preparation) generated by the school and other instances, to upgrade, to perfect and to complete the necessary contents so that the professors can negotiate the professional orientation toward careers of sciences

INDICATORS:

1.8. development of preparation activities for the professional orientation toward careers of Sciences for: (structure of address of the center, provincial methodological teams, officials, UPR and other)

1.9. it assures the integration of the school, the family and the community in each activity and other institutions of the context, to give treatment to depth to the professional problems associated to the professional orientation.

1.10. the preparation for the professional orientation of the professors of Sciences in the IPVCE takes place through different preparation forms,

Dimension II. Preparation of the educational ones in the professional orientation toward the careers of sciences in the IPVCE “Federico Engels” of Pinar del Río, as a result. Expert as working pedagogic demonstrated in each activity developed in function of promoting in a conscious way this process.

INDICATORS:

2,1. level reached by the educational of Sciences in the upgrade, improvement and fulfilment of the content of the professional orientation

2,2. frequency with which it relates in systemic form the content of the professional orientation in each educational activity, extra-educational and extra-school

2.3. planning, execution of actions and evaluation of the educational-methodological work for the treatment transdisciplinary of the content of the professional orientation at level of collective pedagogic

2.4. level reached in the professional orientation toward the careers of Sciences as a result of the improvement of their pedagogic professional acting in function of it.

2.5. projection of the center and their educational ones, as main promoters of a professional orientation toward the Sciences

- The results of the analysis of content of documents rectors by means of a guide threw the following elements:
 - Recognition of the importance of the preparation of the educational ones of Sciences for the professional orientation.
 - Insufficient priority in the projection from the system of work of the center, of this process.
 - Insufficient theoretical-methodological preparation to energize the professional orientation from the work in net.
 - Limitations in the work guided to this process from the tribute of the subjects of sciences.
 - Difficulties in the integration of the TICs to the process.
- The application of a survey carried out the professors of Sciences of the IPVCE of Pinar del Río showed a group of limitations in the preparation of the educational ones in this sense:
- It doesn't contemplate the design of varied and developers from the preparation in their diverse forms and combinations (71.3%).
 - It is not part of the professional evaluation of the teacher's pedagogic acting (80.3%).
 - It is not contemplated as via for the sensitization of the professors of Sciences in the educational work in function of the professional orientation (79.5%).
 - They don't take advantage the possibilities of the combination of activities of educational preparation -, methodological and scientific-methodological in function of the professional orientation (82.4%).
 - They don't take advantage the possibilities of the integration of the school and other educational agencies, in each activity and other institutions of the

context, to give treatment to depth to the professional problems associated to the professional orientation (80,3%)

- The interview results to students of 12mo grade of the IPVCE Federico Engels revealed the following aspects:
- The actions of the educational ones, don't allow the knowledge and the professional orientation sufficiently toward the careers of sciences in a wide and attractive way. (86.9%)
- Few times they are related the contents of the subjects with the professional orientation in the educational activities, extra-educational and extra-schools (20%)
- Insufficient number of students opts for these careers in the center. (43.5%)
- An interview was applied officials that impact in the process that is studied (directive of the center, officials, methodological teams) that revealed:
 - The preparation of the professors of Sciences, doesn't respond to a specific and deliberate plan, to the interests and necessities of upgrade, improvement and fulfilment of the content of the professional orientation toward the careers of sciences (80.2%).
 - Conditions exist in the school (73.4%) to develop enough, varied and attractive activities in function of it.
 - Potentialities exist from the work in net, together to pedagogic strategies focused to the professional problems associated to this process (87.4%).
 - The integration of the results of the applied instruments allowed to arrive before to the following diagnostic regularities on this process referred:
 - It suffers of a systemic character, contextualized and developer.
 - It doesn't constitute a priority inside the system of work of the center, to act as exchange brokers and educational transformations in the center.
 - It is not sustained in the work with the professional problems to improve the pedagogic professional acting.
 - It has limitations in the pedagogic preparation and didactics to approach this process.

This way acquires an essential character, the administration of the preparation of the educational one of the IPVCE to fulfill the mission, vision and paper of this type of centers whose paper in the scientific formation of the youths, is momentous.

In accordance with the Director's Manual in the Education Pre-university constitutes roads for the practical concretion of the process of preparation of the educational ones the following ones:

The roads for the car individual preparation and improvement that are carried out in the school.

The organizational forms of the professional improvement that were suited with the university.

The forms of the educational-methodological work that are carried out in an individual and collective way in the school.

The actions of scientific-methodological work, of investigation and pedagogic innovation takes place in the school environment.

All the above-mentioned allowed to demonstrate the necessity to transform the current state of this process, as essential condition to elevate the quality of the educational administration.

Conclusions

The characterization of the current state of the preparation of the educational ones in the professional orientation toward the careers of sciences, in the IPVCE of Pinar del Río, allowed to sit down the bases for the model of a strategy for the improvement of this process; by means of the acquisition, upgrade, improvement of the knowledge in the content, methods and roads to develop the professional orientation.

The obtained results evidence the necessity to perfect the administration of the professional orientation from the systemic performance and contextualized, of the educational ones; so that they allow, to increase the registration in careers of sciences tunes, starting from the combined work with the entities of the production and the

services, the political, student organizations, of masses and with the participation of the family.

In a same way, the harmonic and coordinated influence will be achieved, of the implied state organisms, to homogenize the influences on the election for the student of professional studies or of specialties about the base of its capacities and vocational interests, and, on the other hand, the satisfaction of the social demands.