

## Rural Constructions in the Professional Training of Students from a Principal Integrating Discipline Perspective

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### Abstract

**Context:** The job insertion of students in the Degree of Education Construction in rural constructions, from the perspective of the professional teaching-learning process of the principal integrating discipline, favors their professional training. From this job context, students associate with constructive typologies that identify their cultural identity, history, the direct relation to nature's agents, and the utilization of local materials that let them work with a prospering and sustainable vision for the conservation and protection of the ecosystem during the process of rural construction.

**Aim:** To provide a rationale of rural constructions as a job context in the professional teaching-learning process through the principal integrating discipline, to students in the Degree of Education Construction.

**Methods:** The essential methods used are analysis-synthesis, induction-deduction, and scientific observation, which provided evidence of insufficiencies in the job training of students in the Degree of Education Construction in relation to rural constructions, from the perspective of the principal integrating discipline.

**Results:** Labor qualities, and the traits of a Bachelor in Education in Construction, in relation to their performance in rural constructions were presented within the job context of the principal integrating discipline, with a prospering and sustainable vision.

**Conclusions:** As a result of a systematization of the theoretical-conceptual rationale, it was observed that rural constructions as an educational context for the development of on-the-job-training practices, favors direct contact with nature, farmer traditions, and food production. It also helps with the architectonic features of works, which allows for the development of professional qualities of students in the Degree of Education Construction, by determining the traits that identify them.

**Key words:** *rural constructions, professional qualities, principal integrating discipline.*

### Introduction

The continuous improvement of Cuban Higher Education is based on principles, whose transcendence is driving ideas of the learning process; the unity between education and instruction, and the ties between study and work. The Degree of Education Construction, as part of that improvement process must provide professionals with a formation that allows them to participate in different labor contexts, and perform with a prospering and sustainable vision, including the area of rural constructions.

Rural constructions, as an educational context where students of the Degree of Education Construction take part during on-the-job-training period, besides enabling the tie between theory and practice, constitutes an integrating core of the local history, cultural identity, and a more friendly relation with nature, which contributes to the development of their professional qualities, and therefore, professional training.

However, a diagnostic study done of the state of the art in professional training evidenced by students of the Degree of Education Construction, through the

professional teaching-learning process of the principal integrating discipline (DPI in Spanish), at the University of Holguin, helped identify the existence of insufficiencies in terms of professional quality development, shown by means of student performance.

In that sense, professional training, was defined and characterized by several authors, such as, Baró (1996), Cerezal (2000 and 2011), Leyva and Mendoza (2005-2020), Alonso (2007-2020), Salgado (2009-2019), Infante (2011-2020), Martínez (2011-2020), and Andrés (2015-2018). The studies conducted at the Center for Labor Training (CENFOLAB), University of Holguin are fundamental for this research.

The main results of the epistemological study done to every scientific research conducted previously in this regard, reveals that though models, theoretical conceptions, methodologies, and strategies have been suggested as possible solutions, the establishment of a dynamics to be followed in terms of job training, by utilizing the topic of rural constructions as an educational context to train students in professional skills, still falls short. In that sense, the aim of this paper is to provide a rationale of rural constructions as a job context in the professional teaching-learning process through the principal integrating discipline, to students in the Degree of Education Construction.

## Materials and Methods

Theoretical methods such as analysis-synthesis, and induction-deduction were used to hold a critical review of the literature, identify logical relationships and links, and to present theoretical generalizations about the development of professional qualities in rural constructions as educational contexts of the professional teaching-learning process based on DPI. The hypothetical-deductive method was used to conduct the research process according to scientific logic.

In addition to the above, document analysis and observation were used to characterize the professional training of students in the Degree of Education Construction, according to the teaching-learning process of DPI in rural constructions.

## Results and discussion

Rural constructions are buildings constructed in rural areas, which respond to the natural limitations of the surrounding, including the climate, nature, and the needs of the inhabitants. Its main function is to design and construct agroindustrial structures, such as rural housing, sheds, greenhouses, facilities for animal lodging, agricultural goods storage, etc.

In this study, reference will be made to housing construction, as an educational context where students of the Degree in Education Construction are employed during their-on-the-job-training period. Several authors have defined them and characterized them. Correa, T. (2000), Díaz, J. (2000), Roze (2000) Aguilar (2001), Tapia (2003), Gómez (2011), Sánchez (2010), Rodríguez (2017), and Muñoz (2020). Sánchez defines them as:

A space built with inner and outer sides. As families are engaged in agriculture, their homes are built within natural ecosystems, which are cultivated, preserved, transformed, or deteriorated. Therefore, it is considered an organism that is active and interactive to the natural, built, and collective environments. It is part of a heritage, not only cultural, but also as an emotional and cohesive support of families, backed or receiving a large influence from their economic and community activities (2010, p. 175).

The location of rural homes within rural settlements, according to Roze, is related to the proper accessibility and distance to the croplands. It also considers that it is a cultural, and ritual, knowledge space, since it takes a fundamental place in terms of ceremonial activities involving community sociability, relationship, and solidarity (2000, p. 5). The location of a rural home, near the workplace, and its close relationship with work-related activities, make the home a producing and cultural unit, rather than just a room.

In this sense, a rural construction is considered the result of self-construction of the rural habitat by the farmer community itself. It can be characterized as one using local resources, such as construction materials, and one that responds to natural limitations of the surrounding (climate and vegetation), to the needs of the main activity (agricultural use), and that of the family that builds it. (Muñoz, 2020)

The previous helps understand that during construction, the environment, the flora, and fauna must be respected. Another important aspect is to prevent excessive generation of material waste, or the utilization of additives that contribute to soil degradation. Construction supports the agricultural process, and environmental protection mainly; hence, they must provide wellbeing to communities, which is consubstantial to agriculture; the more conditions the habitat has, the more man produces.

These works, as educational contexts for the development of student on-the-job-training, favor the development of professional qualities related to the establishment of contexts where students, beside systematizing professional skills, are in direct contact with nature, use local materials, and apply

construction technologies that preserve the environment. They also become familiar with the traditions and cultural identity, allowing them to understand the importance of these works for the production of food, thus contributing to their professional skills.

Several authors have defined professional training: Baró (1996), Cerezal (2000 and 2011), Ávila (2003), Cruz (2003), Leyva and Mendoza (2005-2020), Alonso (2007-2020), Thompson (2009), Silva (2009), Salgado (2009-2019), Infante (2011-2020), Martínez (2011-2020), and Andrés (2015-2018). Martínez defines professional training as:

The process and result that is materialized in the development of professional qualities of the personality, depending on the integration of the system of educational influences practiced by social institutions on this topic. They can apply professional contents, adapt to the socio-professional context, and transform it to meet social needs (2014, p. 3).

This definition has been embraced by this research, since this author considers the educational influences exerted by institutions in terms of the relevance of professional training from a DPI perspective, and it includes the educational potentialities generated in educational contexts where students are inserted, such as the case of rural constructions.

In particular, higher pertinence education in this research has been tackled by several authors, who deal with professional training, and have conducted research studies at CENFOLAB: Salgado (2009), Infante, Leyva, and Mendoza (2013), Alonso, Leyva, and Mendoza (2016), Infante (2017), Andrés, Alonso, and González (2018), Viamonte (2019), Alonso, Dorrego, and López (2019), Alonso, Martínez, and Domínguez (2019), Infante, Alonso, and Pupo (2019), and Salgado, Leyva, and Mendoza (2019).

The above authors deal with professional training based on the relationships established between job performance and technological changes; they also refer to professional qualities that should be part of students throughout their degree. This criterion has been shared, but the theoretical and methodological arguments about professional training are still insufficient, considering the perspective of the application of educational potentialities based on DPI in the Degree of Education Construction during the on-the-job-training period, particularly in rural constructions. Moreover, the traits that show professional qualities, fail to characterize the modes of performance of students in the Degree of Education Construction.

In this sense, Alonso et al. acknowledged that professional training goes beyond the study of knowing and knowing how to, within the context of professional training in the workplaces, and consider the development of qualities required to form the personality of the future worker, by developing knowing and knowing how to. (2016, p.2). The authors stress on the development of the personality (qualities), depending on professional performance in a particular job context. These aspects should be considered when students are part of rural constructions during the job training period, as part of the educational context in the professional teaching-learning context based on DPI.

The theoretical conceptions of professional training in higher education provided by CENFOLAB, which back up this research, analyze the development of professional qualities of the personality as the object of study of professional training. In that sense, this research coincides with Alonso, Martínez, and Domínguez that qualities:

Represent the set of traits, which are typical of ways of thinking, feelings, and actions by a subject, according to the assimilation of standards, values, and convictions. They present a relative independence of the situation, and are manifested in concrete and stable habitual conducts (2019, p. 119).

In turn, Infante considers that professional qualities are “relatively stable characteristics, manifestations of personality self-regulation that express the attitude of subjects toward a work activity” (Infante, 2011, p. 33).

This author also refers to the aspects that characterize professional qualities, which are worth considering for development from the perspective of rural constructions, during their on-the-job-training period, according to the professional teaching-learning process of DPI, which are below:

Qualities are primary psychological units: they are significant contents for the subject; they are highly stable, since they do not change, essentially, during a considerable period of life; they do not require a reflexive process, as they do not utilize cognitive operations actively and consciously, there is no deep analysis of the situation; they do not make a completely objective generalization of different facts and phenomena they confront; they act immediately on the behavior toward situations linked to their regulating action, which means that the performance of a subject is quick, immediate, and direct in face of situations linked to these contexts; they generate a strong emotional load due to the affective bond to the subject through their needs and motives, acting is quick, direct, and

immediate on the regulation of behavior (Infante, 2011, p. 31).

In this sense, from a pedagogic point of view, qualities can be developed throughout life, coinciding with Infante and Leyva.

They pointed that professional qualities are formed and developed during the course of the activity, and the communication, established within the frame of relationships between the subjects and society; they develop through the formative process, and integrate different psychic processes produced in the subject, which are modified, depending on the variety, contradictions, and barriers that characterize different social situations in which the subject interacts, only making sense inside their own history (2012, p. 31).

Professional qualities of students from the Degree of Education Construction are thought to be developed in rural constructions, and are also an expression of attitudes to find solutions to professional problems, the love of nature, identity, historical culture, and rational use of resources available for rural construction performance. Hence, professional performance is,

A necessary activity to achieve the results demanded in the professional environment, which calls for several degrees of complexity and demands in terms of knowledge and skills (knowing how) to be used as an expression of their character of totality in their performance (Alonso, et al., 2016, p. 108).

Based on this analysis, it is understandable that through professional performance in rural constructions, as educational contexts for the on-the-job-training period, the students of the Degree in Education Construction evidence the level of development of professional qualities reached, according to their levels of manifestation.

Therefore, the development of professional qualities in the Degree of Education Construction from a rural construction perspective requires the determination of professional qualities of the Bachelors in Education Construction, and the traits manifested, depending on the modes of performance declared in the Model of the Professional.

Based on this analysis and the referent theoretical rationale of conceptions of professional training in higher education, particularly in pedagogic studies, stated by Infante et al. (2013), and in university studies, provided by Alonso et al. (2016), both from CENFOLAB, and the characteristics of rural constructions, the professional qualities determined for the Bachelor in Education Construction, which

must be developed throughout their performance in rural constructions are responsibility, hard-working, sensitivity, independence, and creativity, coinciding in the two conceptions. The specific traits manifested in them are

Responsibility, expressed as:

- The knowledge, assumption of duties, and fulfillment of regulations, safety standards and health at work, which have been established by the Ministry of Construction, as well as standards and laws, regulations and standards established by CITMA for the protection of the environment.
- Rational use of resources available for the solution of professional problems in rural constructions.
- The professional demand to comply with social and individual duties.

Hard-work, expressed as:

- The love for work, and the job done in particular, which relies on dedication and perseverance during their performance in rural constructions.
- Their positive attitude during the job training period in rural constructions, by showing perseverance and dedication in conducting professional tasks.
- The will and effort to solve professional problems presented in rural constructions.

Sensitivity, expressed as:

- Feelings of love for the work done, empathy and close ties with the workers and inhabitants of rural constructions.
- The interest given to the solution of professional problems during the execution of rural works that favors affective interpersonal relationships with the workers and the members of the community, as well as compliance with the safety and health standards in the workplace, along with the technical documents of the project of rural constructions.
- Understanding the importance of these works for food production, the protection of nature, the utilization of local materials, and the application of construction technology that preserves the environment, traditions, and cultural identity.

Creativity, expressed as:

- The flexibility of thought, by identifying professional problems and their causes, manifested during the execution of rural works.
- Originality and imagination in the search for novel and varied solutions to contribute to the protection of the environment.
- Intellectual curiosity, which is expressed by the

search of scientific state-of-the-art knowledge related to history and cultural identity of rural areas.

- Flexibility and fluidity in the combination of own and other people's experiences in the solution of professional problems that come up in rural works.

Independence, expressed as:

- Decision-making, as a result of assessment made regarding the quality of the solution of professional problems, from technical, economic, environmental, energetic, and social angles.
- The solution of professional problems based on their knowledge and skills, during the execution of rural works, depending on the possibilities and potentialities.
- The determination and expression of criteria and variants that favor the proposal of new actions for the solution of professional problems during the execution of rural works.

Based on the analysis of the traits of professional qualities of Bachelors in Education Construction presented in this research, the incidence that student job insertion in rural constructions has during their on-the-job-training can be understood. It nurtures their historical culture, cultural identity, preservation of the ecosystem, the relation of these works to food production, and therefore, their professional training.

The professional qualities developed through rural constructions, are based on:

- Direct contact with nature, with the application of laws, regulations, and standards established by CITMA and the Ministry of Construction to protect the environment, the flora, fauna, and soil.
- The rational use of construction materials that do not harm the environment.
- The application of construction technologies that preserve the cultural heritage, traditions, and the utilization of local materials.
- Taking the advantage of the benefits provided by nature in favor of human wellbeing, as a way to raise life quality.
- The knowledge of history and traditions of rural areas.
- Identification of the link between construction and food production.

## Conclusions

As a result of a systematization of the theoretical-conceptual rationale, it was observed that rural constructions as an educational context for the development of on-the-job-training practices, favors direct contact with nature, farmer traditions, and food production. It also helps with the architectonic

features of works, which allows for the development of professional qualities of students in the Degree of Education Construction, by determining the traits that identify them.

## Author contribution

Nurbia Ivía Zaragoza Morales: research planning, analysis of results, manuscript redaction, final review.

Miguel Alejandro Cruz Cabezas: data collection, analysis and interpretation of results, redaction of the final manuscript, final review.

Orlando Martínez Cuba: data collection, analysis and interpretation of results, redaction of the final manuscript, final review.

## Conflicts of interest

Not declared.

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