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Curricular trends in the Universidad Francisco de Paula Santander academic program offerings

H Parra-López[1], J P Rojas-Suárez[2], and M Vergel-Ortega[3]

[1] Departamento de Sistemas e Informática, Universidad Francisco de Paula Santander, San José de Cúcuta, Colombia

[2] Departamento de Construcciones Civiles, Vías y Transporte, Universidad Francisco de Paula Santander, San José de Cúcuta, Colombia

[3] Departamento de Matemáticas y Estadística, Universidad Francisco de Paula Santander, San José de Cúcuta, Colombia

E-mail: anovaufps@gmail.com

Abstract. The objective of the research work, was to analyze the curriculum of the programs from "Universidad Francisco de Paula Santander" in San José de Cucuta, Colombia. The sample was participatory non-probability, with the participation of 200 students from Catatumbo and university student´s, both from the different semesters and documents curriculums. A mixed study of sequential explanatory design was applied. In the first quantitative phase, the results were obtained by applying a digital questionnaire to the students. The data were analyzed using the observation guide for their respective analysis. The results of both phases were merged by the contrasting method. The conclusions demonstrate the importance of curriculum for training in research and innovation and critical thinking, curriculum for the creation, adaptation and/or use of communication and information technologies, curriculum for social inclusion in the university.

1. Introduction

The curriculum, within the framework of pedagogical approaches and models inspired by critical pedagogies, has focused on the formation of innovative, social and political subjects from a social and critical perspective of society and education (emancipatory interest). Etymologically, the curriculum is understood as "a career or course", understood as "course of subject matter studies" [1]. The concept "curriculum vitae" is nothing more than the "career of life" [2], specifies that "curriculum is a project that presides over school educational activities, specifies their intentions and provides adequate and useful action guides for teachers who have direct responsibility for their execution" [3], for his part, affirms that the "curriculum is the link between culture and society outside the school and education [4], between inherited knowledge or culture and student learning, between theory (ideas, assumptions and aspirations) and possible practice, given certain conditions". The curriculum is the expression and concretion of the cultural plan that a school institution makes a reality within certain conditions that qualify that project [5].

Around this, the orientations in the referred direction, to the conceptions of education that have been present in tasks and in academic programs, where the curriculum is the mediating element between educational theory and its practice [6], to give solution to social problems and to promote the economic development of a country, particularly of the region of Catatumbo, so that the institution and its offered

programs show a constant innovation, are exposed then some of the tendencies in curricular matter and the measure in which these have been applied independently of the sources of origin; curricular trends present in the academic programs that the region demands, as scenarios and challenges that are put forward in different models and forms of knowledge construction and the environments that generate it.

2. Methodology

In accordance with the stated objective, the research was carried out under the mixed approach defined by [7] as a set of systemic, empirical and critical research processes involving the collection and analysis of quantitative and qualitative data, as well as their integration and joint discussion. The mixed method of research facilitates drawing inferences from all the information collected for a better understanding of the phenomenon under study. From this approach, the methodology has an emergent character. It was applied the conjunction of different concepts, theories, methods of conceptual and numerical analysis of the results. An explanatory-sequential research design was constituted, which is divided into two phases, the first quantitative and the second qualitative analysis [8]. The study, although of greater qualitative weight for the interpretation of the data obtained and their results, is not considered to have been neither decisive nor of rank for the researchers, since it is of great complementarity in the analogy of the results.

A statistical analysis was applied to determine the reliability of the questionnaire, for the research, experiences were taken from academic programs at the Universidad Francisco de Paula Santander (UFPS). The materials analyzed were in-depth interviews, semi-structured, participant observation notes, and analysis of documentary, physical and virtual sources [9]. Around the set of criteria, academic programs are consolidated and their corresponding curricula, programs, methodologies, and processes that contribute to the formation of quality and the construction of scenarios that promote national, regional, and local cultural identity, in which the institution relies on actors and academic and physical resources to put into practice the educational policies of the "Ministerio de Educación Nacional (MEN)" of national education, Colombia, as well as policies at the international level that allow the mobility of actors in the educational process to fulfill the institutional educational project and the mission and vision of the UFPS.

The Kappa 0.9 and Cronbach Alpha coefficient of 0.89 considered [10] as a high value in reliability. For the analysis of the research results, the generalized triangulation of the results was carried out, characterized by [11] and [12] as the application of diverse methods where, after collecting information, the results are contrasted, analyzing coincidences and differences [13]. For the aforementioned authors, it is a control procedure implemented to ensure the reliability of the results of any investigation. The results were the object of triangulation strategies where more strength can be shown in their interpretation and theoretical-analytical construction.

3. Results

The information collected is then analyzed and demonstrated according to the instruments applied in each of the phases. The qualitative phase interprets the information by means of the observation technique with the observation guide instrument

3.1. Curriculum for training in research and innovation and critical thinking

The constitution of a research curriculum for the formation of critical thinking is highlighted, crossed with deliberative practices in research: pedagogical practice accompanies all spaces from the radicalization of the student-teacher dialogue in the formulation of researches that propitiate the development and production of projects around a meaningful knowledge: interdisciplinary groups, interdisciplinary advice, collectives, consolidation of seedbeds.

According to the postulates of Saldarriaga [1], the articulation between scientific and technological production, appropriation of knowledge and deliberation, between curriculum and democracy, is the axis of this trend. This trend, present in engineering and agricultural science programs, implies in their programs and corresponding curricula, to create and promote different meanings of learning, science

and knowledge, not functional to the hegemonic system. It proposes the participative and deliberative production of knowledge for the solution of problems in different contexts for social emancipation; not only of reproduction, it implies the development of mechanisms that mobilize the desire to know and the interest for emancipation processes of subjectivities. The recognition of students as subjects of knowledge, in a process subjectivity that points to the liberation of that motivated desire to know (as heterotopia) and to solve problems, turning them into managers of transformative knowledge, favor the rupture with processes of subjection proper to the educational world of pedagogical models of past centuries: to guide and pause experience, the desire to know curricular frameworks and rhythms.

3.2. Curriculum for the creation, adaptation and/or use of communication and information technologies
This trend configures the implementation of virtual, blended, and face-to-face educational spaces, allowing not only the use but also the creation of platforms, software, applications, games, blogs and other didactic tools that are integrated to the methodologies and educational trends used by the academic community. Digital communication, teleconferences, videos, video-chats, the creation and massive use of the PLAD Platform, the participation in networks whose communication is promoted through the web, the use of the cloud for dissemination and use of pedagogical-didactic material, web tools, software production, blogs, has indicated an impact on educational processes, in the development of creative thinking, in academic performance and in the satisfaction of young people in training as support for pedagogical practice and academic advice, which is developed in each program from each module or area of knowledge taught, the above, according to research conducted. In the university, is accepted by the community the need to implement technological advances, their implications and the role of the human being, so technology has become an actor that participates in the processes of training, society and culture of information, being a primary tool in obtaining information that must be evaluated and updated continuously. On the other hand, the educational process is increasingly confused with work.

Generation of communicative skills and dissemination of results of research projects or research processes, in a look beyond knowledge, content but knowledge management, according to needs and profiles of professional training in which the whole community is integrated to support perspectives that enhance and respond to a vision of the citizen, actions that manage their skills, their knowledge, so that upon graduating, can communicate their knowledge in order to overcome epistemological obstacles present in the learning of different areas and sciences and those between technological development, work and study. This trend is supported by educational trends such as big data, wearable, artificial intelligence, telepresence, learning in the cloud, video games or challenges from the web. The idea according to which it is necessary to accumulate many and varied knowledge is being left behind, the important thing is to know how to learn them when they are needed, to know where to find them and how to obtain them, because knowledge by itself is not the final objective, it makes sense in the measure of its application and validity.

This order strengthens the student's relationship with his environment, with its two universes: exterior and interior, which makes it necessary to recognize him/herself in the virtual environment and the use of information and communications technology (ICT): interactive curricula, teaching simulators, electronic libraries, repositories, information networks, networks of scientific journals, thesauri, and all the emerging technology in this field; for which the demand for new environments and new roles for the teacher, the student, and the institution, as well as different languages and competencies in teacher training, are challenges that are continually faced and enhanced. On the other hand, systems associated with robotics and the presence of absence from scenarios virtually, telepresence or augmented reality, multimedia supports and the analysis of audio-visuals and computerized language, specifically centered on image and audio, are emerging. Information is obtained through friendly languages and in a special way, through visual language, in the simulation of phenomena; interactivity, the instantaneity of information, the development of the associative process and the diversity of both information and ways of obtaining it.

3.3. Curriculum for social inclusion

Its curriculum incorporates projects, proposals and alternative scenarios for young people with a tendency to exclusion for reasons of race, ideology, gender, level of cognitive or psychosocial development, economic level, physical or psychological condition; excluded from the educational system, displaced, victims of violence, victims of natural disasters, not accepted by society (Afro communities, feminism; young people in pregnancy, consumers of psychoactive substances, or expelled from other institutions). Their commitment is to become socially inclusive programs. In the proposed training processes, a particular shift is made by academic evaluation: the deliberate shift from hetero regulation to self-regulation, diminishing the emphasis on sanctioning devices and strengthening learning (satisfaction) devices through self-examination, as "an element of a twofold system: gratification-sanction. And this is the system that becomes operative in the process of channeling behavior and correction" [15].

In addition, scenarios are constructed to transform conceptions and practices that generate violence: legal advice, student groups that mediate conflicts, student self-evaluation, as well as meetings on sexual and gender diversity, bullying, social, political and human needs, convened by students. This tendency shows characteristics of subjectivities processes, horizontal authority in certain disciplinary decisions, and promotes the recognition of subjects considered socially excluded. This is framed in the daily dynamic and its rules (ethics, leadership, respect, fulfilment of commitments), in front of a logic of freedom, self-awareness, recognition and valuation of the other, to live from experiences, and learn from self-interest in order to strengthen skills of co-government and care of others. Thus, students form groups, seedbeds, collectives, associations for the mediation and processing of conflicts, regardless of authority.

3.4. Curriculum social and epistemology

Reasoning or discourse, it´s a branch of epistemology that studies from practices the social construction of knowledge seeking answers to environmental problems from the analysis of the real context of the research actors focusing attention on institutionalization mechanisms always when they are defined in a curriculum considering it as a social organization of knowledge [16]. Social and epistemology theoretically bases the present research from a pedagogical point of view insofar as they coincide with its systemic methodology, since they focus on phenomena of production and dissemination of knowledge from a multiple point of view, studying the interaction between epistemology, sociocultural dimension, cognitive processes associated with the development of specific competencies and mechanisms of institutionalization via teaching. At the same time, it considers social practices as the basis of knowledge, where all forms of knowledge are given importance, which its source can be popular, technical or cultured, thus constituting the human wisdom as sustenance and the orientation to carry out a social construction of knowledge.

It has four interrelated fundamental principles: the principle of contextualized rationality, the principle of epistemological relativism, the principle of progressive resignification and the normative principle of social practice. In this sense, social practice becomes a learning scenario for students, which is why it is presented as a didactic panorama for teaching where the context offers situations that modify the individual in collectivity, with the participation of peers, classmates or other urban actors that promote learning by acquisition facilitating among them the communication of mathematical concepts and procedures from consensus that validate a mathematical discourse. The theoretical bases related to teaching and didactics and conflicts with discourse, places as an example the difficulties in higher education presented by the study of calculus [17], its impact applied to science and the causes of reprobation and rejection in students. Within the studies carried out with a social epistemological approach, the development of skills in students is proposed using graphical representation from social practice and social scientific argumentation, involving processes such as measuring, predicting, modeling and agreeing, according to the methodological purposes of this research. The use of graphing as a social practice in the specific case of functions in the calculation for the construction of a discourse, the argumentation as competence developed in the social practice of context in the students supposes

the collective participation of conceptual and academic agreements for the construction of knowledge. It confirms the arguments as a sociocultural construction that responds to the social practice of demonstration, as a mechanism to validate hypotheses and results of the knowledge acquired by a society. It is in the exercise of social practices where the actors construct their knowledge as a tool for their intervention [18] in logical language. In the human activities of investigating and teaching, in the social practice of demonstrating, it is the argumentation, that is constructed in the sociocultural scenario and that is manifested in the social practice of demonstration [19]. It is the scientist argumentation, the one that is reflected in the social practice of the demonstration and is put in action in it. For that reason, this investigation is faced investigating about the sociocultural construction of the argumentation.

4. Conclusions

The development of skills in university student's is proposed using graphical representation from social practice and social scientific argumentation, involving processes such as measuring, predicting, modelling, according to the methodological purposes of this research. Curricular trends present in the programs of the UFPS, are based on the critical dialogical approach associated with training in research and innovation and critical thinking, social inclusion, use of technologies, social and epistemology, according to the professional profile.

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