



# Entry, permanence and strategies for the promotion of Research Seedbeds in an HEI in Colombia

## Ingreso, permanencia y estrategias para el fomento de los Semilleros de Investigación en una IES de Colombia

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### ABSTRACT

The Research Seedbeds (RS) have been consolidated as a strategy within Higher Education Institutions (HEIs) to strengthen the research axis. It is possible to bring future professionals closer to the construction of knowledge through its developments. This article, developed under a mixed research approach, exposes the strategies designed by an HEI for the entry, permanence and promotion of RS in its educational faculty from the perspective of students, teachers and managers. Among the main findings is the relevance of social networks as a form of communication and the importance of incentives – not always economical – for permanence in the group.

**Keywords:** teachers, higher education, students, research, networks.

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### INTRODUCTION

Within the mission axes established for Higher Education in Colombia, as described in Law 30 of 1992, are Teaching, Extension and Social Projection, and Research (Sánchez et al, 2016). This last purpose, as indicated by Vargas (2010), focuses on the construction of knowledge that allows the development of society. That is, research is conceived as a bridge so that, through its developments, Universities become catalytic agents of good living. Hence, educational institutions constantly generate strategies for the consolidation of their research culture, a factor that is also highly valued in the processes of accreditation for high quality.

One of the most popular strategies for the strengthening of the research mission is the Research Semilleros (SI), which, according to Aldana (2010) and Gómez et al (2022), are collectives sponsored by the Teacher-Researchers with the purpose of forging leaders with a research spirit, in order to lead processes of (re)construction of knowledge. To this end, according to Ríos (2009), a challenging environment must be generated for students, where permanent dialogue, thematic discussion and analysis of social realities are the guiding thread of the collective, thus awakening the interest of students in the development of research processes, which will allow them, in addition to intervening in their context of interest, to forge competencies in different areas. In this regard, Saavedra et al. (2015, p. 402), state that the IS:



favor the generational relay of research lines and guide the professional projection of students. Likewise, they are characterized for being alternative scenarios for academic and research discussion, fostering interdisciplinarity and strengthening the research skills of students and teachers. Different philosophical postures and ways of approaching phenomena converge in them, which facilitate finding solutions to problems from the perspective of the diversity [favor the generational relay of research lines and guide the professional projection of students. Likewise, they are characterized for being alternative scenarios for academic and research discussion, fostering interdisciplinarity and strengthening the research skills of students and teachers. Different philosophical positions and ways of approaching phenomena converge in them, which facilitate finding solutions to problems from diversity.]

In this regard, Cantú et al (2020, p. 25), add that "research seedbeds have emerged as a response to the need to introduce students and young professionals, through a process of motivation, participation and continuous learning, to the practice and methodology of scientific research"; therefore, it is evident that the consolidation of IS in Higher Education Institutions (HEI) is a task of great relevance, which deserves the full attention of the academic community, since its proper functioning will be proof of comprehensive training and generation of development in the areas of influence of the HEI. In addition, the consolidation of IS allows idealizing research as a leading agent of university work, breaking the stigma of this as a simple area "with no greater pretension than that of being developed through contents and procedures" (Rodríguez, 2006, p. 32), revealing its true potential in future professionals.

Consequently, the objective of the research was to identify the motivations of the students of a Colombian HEI for joining the IS, the communication and dissemination strategies they use, and also the elements that stimulate participation in the aforementioned groups. The reading of the research variables was carried out from two dimensions, the students and the teachers-managers, in order to have an integrated analysis of the evaluated phenomenon.

## METHODS

### **Location.**

The research was conducted at the Universidad de la Amazonia - UA, which is located in the city of Florencia, department of Caquetá, in the southwest of the Colombian Amazon (Gómez et al, 2016). The UA is a higher education institution of public character, linked and monitored by the Ministry of National Education - MEN, after its consolidation through Law 60 of 1982 "*By which the Regional of Florencia of the Universidad Surcolombiana, is transformed into the Universidad de la Amazonia*", and its respective Resolution of recognition No. 6533 of 1983 issued by the MEN. The program addressed in particular is Business Administration, which is attached to the Faculty of Accounting, Economics and Administrative Sciences, consolidated as one of the flagship programs of the Alma Mater, as it accounts for about 10% of the student population of the institution, and also has an uninterrupted offer of 24 years, which consolidates it as a program of great trajectory in the region.

### **Population.**

The students consulted are those who, at the time of developing the research, were formally linked to an IS within the evaluated program, for this purpose, a direct consultation was made with the teachers who coordinate such groups, who provided the information. The total number of students consulted was forty-nine (49). The teachers consulted were those who, at the time of developing the research, had within their academic work the responsibility of accompanying an IS, for which the academic director of the Program was consulted. The total number of researcher-teachers linked to the research amounted to six (06). Likewise, as part of the triangulation process, the Coordination of the Business Administration program and the Dean's Office of the School of Accounting, Economics and Administrative Sciences participated.

### **Methodological approach and research instruments.**

The research was developed under a mixed approach, since quantitative and qualitative data were linked (Guelmes and Nieto, 2015). The qualitative component is reflected in the surveys applied to students active in the IS, which were processed through Excel; meanwhile, the qualitative component is in the interviews conducted with teachers and managers related to the management of the IS, which were processed through the *Atlas Ti* software.

## RESULTS AND DISCUSSION

### **Participation in IS**

#### **Students' motivations to participate in IS**

Upon inquiring about the motivations for remaining active within the IS, 55% of those surveyed stated that their main link with the collective revolves around the development of their degree option, i.e., far from being a space for reflection, criticism and the construction of new realities based on the analysis of the context, the IS are seen as a bridge to fulfill a requirement and be able to opt for a professional degree, blurring their nature as "a search experience, in terms of knowledge, that is constructed with others, in the context of the professional degree, the IS are seen as a bridge to fulfill a requirement and be able to opt for the professional degree, blurring the nature of these as "an experience of search, in terms of knowledge, which is built with others, in an exercise that encompasses reason and emotions, that is, that interpellates the human being as a whole" (Cárdenas, 2018, p. 136), limiting them to a technical-administrative formality.

In a second moment, with 27% of representativeness, is the development of competencies in the area of research, an argument that presents a greater harmony with the very essence of IS, since, as stated by Gómez and Ortiz (2017, p. 60):

In the instant in which the student understands the need to group the skills and knowledge acquired from the classroom project experience itself, this arises from the desire to be, more than a "professional" with "technical" mastery of his area of study, a subject that generates knowledge of his profession. In this same sense, another space that allows (re)habilitating the dynamics under study is analyzed: the research group. [At the moment in which the student understands the need to group the skills and knowledge acquired from the experience of the classroom project, this arises from the will to be, more than a "professional" with "technical" mastery of his area of study, a subject that generates knowledge of his profession. In this same sense, another space that allows (re)habilitating the dynamics under study is analyzed: the research group.

In third place, with a representation of 12%, it is found that the IS are seen as a platform for future job opportunities, specifically for the future exercise of teaching, and, academically, for access to scholarships and postgraduate training opportunities. For this group of students, it is clear that Universities are increasingly demanding with the requirements for the hiring of personnel and that research is a sine qua non element, as stated by Santacoloma (2012), who maintains that "a research seedbed should be a formative experience, which includes actions, knowledge, reflections, formalities, rules, flexibilities, everything in the professional, scientific, but above all in the personal" (p. 20), the author adds that "research must be a natural trap to form people and good citizens" (p. 21). ), i.e., this strategy is committed to the integral transformation of the being.

Finally, it was found that the remaining 6% affirms that they are linked to the IS for the economic benefits they receive, since, according to the internal protocols of the IES, active participation in the IS generates a 15% discount on the value of the semester, denoting then a merely economic interest, which is at odds with the postulates and foundations of the IS, since the development of competencies and skills is relegated to the background for this segment of the population.

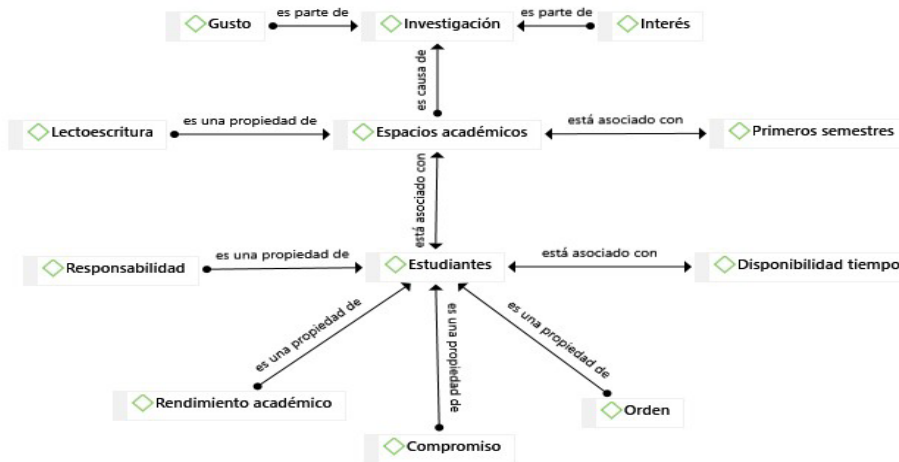
#### **Entry and permanence in the IS: A reading from teacher- directors.**

For the teachers and directors, the academic spaces are very important to be able to identify the possible entries to the respective research seedbeds, the important thing in their opinion is to have taste and interest. Some IS directors considered it more important to train students in research from the first semesters, that is why from these spaces they invite them to join the group; other IS directors considered that their policy is to work with more advanced semesters. Once the student enters the IS, the challenge is to assume responsibility for the process and, of course, to have time available. Likewise, the IS student must be orderly and, as far as possible, maintain good academic performance (Figure 1):

The accounts reveal several elements for discussion. For example, it is found as a positive element the interest of teachers in linking students to IS, which would account for an articulation in the triad Teachers-Research-Students; however, it is also evident the absence of a linking policy/strategy, because it is done according to the criteria of the teachers, when, ideally, it should be done in an institutionalized way. This, according to Vega (2019), is somewhat

of a risk, since “if there is no clear work route, there is a risk of getting lost in details and not advancing” (p. 50), wasting the initial taste and interest of the Students.

**Figure 1.**  
*Factors that encourage entry and permanence in the IS.*



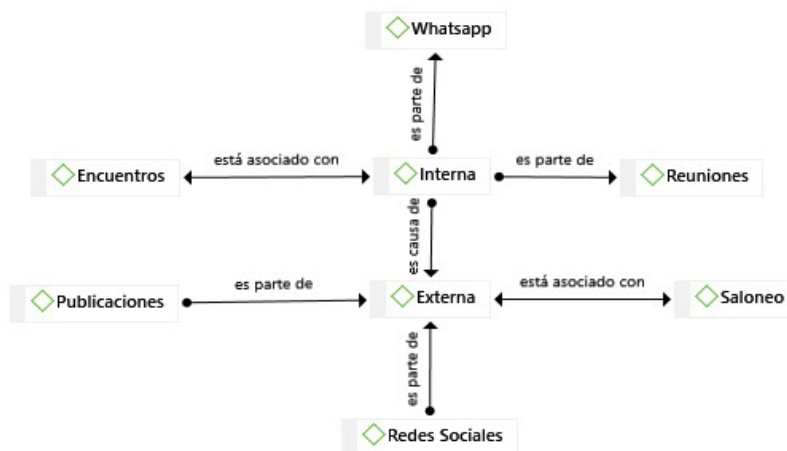
Source: Own elaboration based on interviews.  
Note: the figure appears in its original language.

**Communication and dissemination strategies used by the EAP ISs.**

On the other hand, it is also evident that this extracurricular activity demands time from the Students, and this factor, according to Díaz et al (2019), is critical, since the IS take a back seat to the responsibilities of the curriculum itself, especially in evening programs, where permanence at the University is limited. Therefore, it is essential that the IES generates a series of incentives aimed at guaranteeing permanence within the IS, so that they become part of the academic priorities of the students.

According to the accounts of the students active in the ISs, communication strategies involve both external and internal elements. Internally, the groups hold face-to-face meetings and also virtual meetings; in addition, WhatsApp is used as an immediate communication mechanism. For external or formal communications, publications of research results in newspapers, academic-scientific journals, web pages or participation in books are used (see Figure 2):

**Figure 2.**  
*IS communication strategies*



Source: Own elaboration based on interviews.  
Note: the figure appears in its original language.

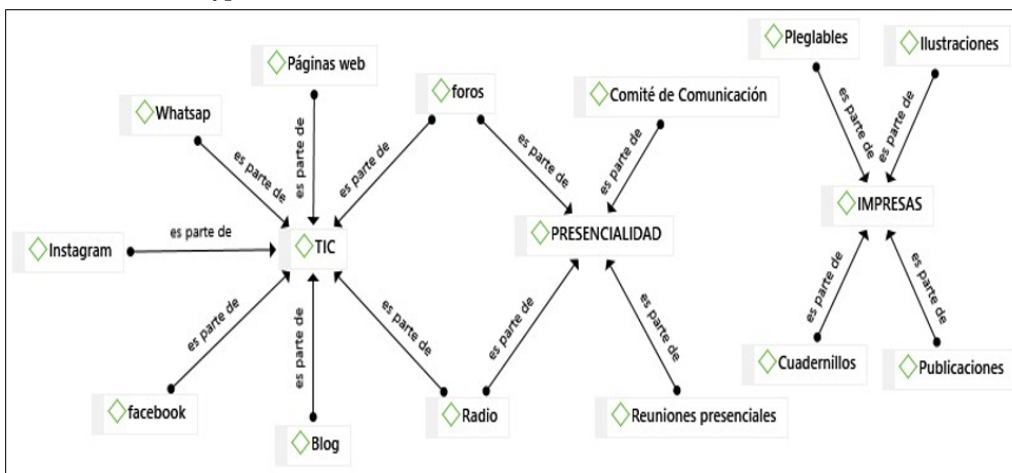
Consequently, as shown in Figure 3, the communication strategies employed could be classified as follows: ICT, face-to-face and printed. In ICTs, those related to the use of Blogs, Instagram and Forums are more particular and

not so generalized; however, technological mediations such as WhatsApp and Facebook did appear in all the reports. Usually, the seedbeds have a Communication Committee, who are in charge of choosing the relevant strategy for some of the commitments or issues they want to share. The above ratifies what was stated by Hernández (2017, p. 334), when he affirms that:

It is a fact that the contribution of ICT to education and society as such, is flexibility and adaptation to an ever changing environment; it was perhaps at first the work the main affected in this process, however, the passage of time has shown that society depends on a technological approach to help build and acquire knowledge. [Es un hecho que el aporte de las TIC a la educación y a la sociedad como tal, es la flexibilidad, y la adaptación a un entorno cada vez más cambiante; fue quizás en un inicio el trabajo el principal afectado en este proceso, sin embargo, el transcurrir del tiempo ha evidenciado que la sociedad depende de un enfoque tecnológico que lo ayude a construir y adquirir conocimiento].

At the printed level, there are folders, more for dissemination of the collective's research results; illustrations, especially for congresses, seminars and events in general; booklets, which contain the methodological designs of the projects and various publications (Figure 3):

**Figure 3.**  
Types of IS communication and dissemination media



Source: Own elaboration based on interviews.  
Note: the figure appears in its original language.

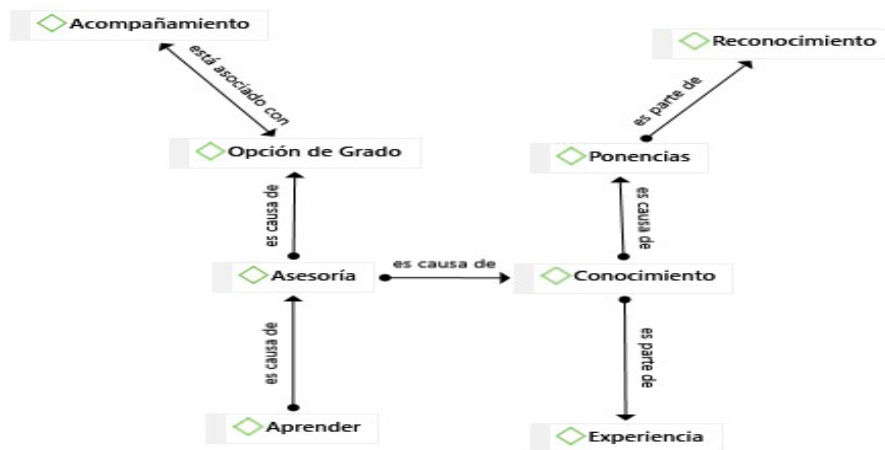
**Dynamizers of Student Participation in IS**

*A reading from the Students*

The categories that accompanied the stories of students who have had the experience of belonging to one of the PAE's seed groups revolved around two complementary categories: mentoring and knowledge. The research students see their seedbed as the space where they receive advice, which is fundamental not only for learning to do research, but also for shaping it and making their degree option possible, whether with relevant participation in a research project, article or thesis. In this order, the degree option mediates between the categories of advice and accompaniment, the latter seen as the way in which the seedbed provides the student not only with technical and methodological guidance, but also the monitoring of the process from the design of the research to the writing of the final report, so that the space is considered as a generator of knowledge, a knowledge that is neither static nor closed; on the contrary, it is disseminated and shared through various means and strategies, such as presentations, which, in addition to being an experiential experience for the students that nourishes their professional life, contributes to the recognition of both the student and the seedbed (Figure 4):

In this regard, Criado et al. (2020), state that the dissemination of results is a solid strategy for the consolidation of IS, since by empowering students in their processes and giving them a leading role in events and/or publications, their level of commitment and closeness to the IS grows rapidly; in addition, this way the higher purpose of these groups is fulfilled, which revolves around “an academic and personal enrichment for people who voluntarily decided to venture into the research life” (Saavedra et al., 2015, p. 988). And, finally, these products have a greater significance in terms of measuring research groups.

**Figure 4.**  
Elements that energize the participation of PAE students in Unimazonia's research seedbeds.

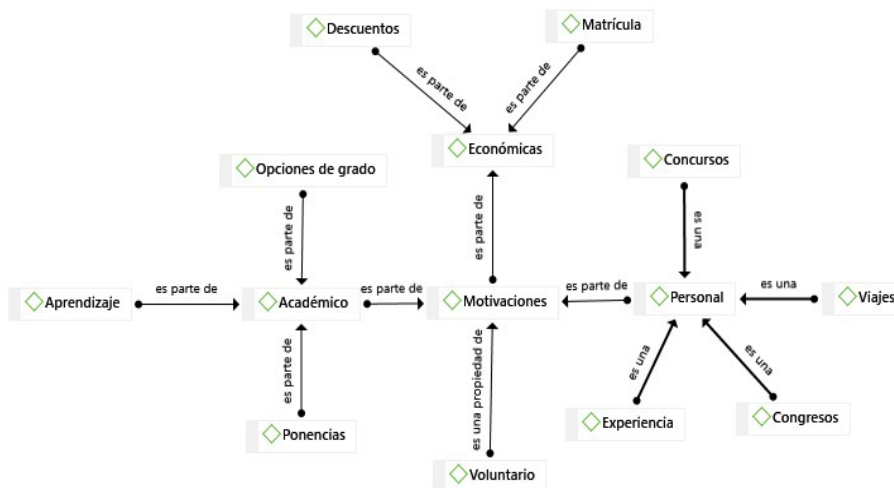


Source: Own elaboration based on interviews.  
Note: the figure appears in its original language.

**A Reading from the Teachers-Managers**

The directors pointed out in their narratives, the voluntary nature of the seedbed projects, and the motivations that students have to enter these academic spaces are related to academic, economic and personal issues. Academically, although the seedbed projects cannot be used as a degree option, the space does allow the students to achieve a learning experience that will help them to develop a pre-project and develop it. In economic terms, the main elements are related to the discounts on tuition fees, a situation that seems to be an important retribution. On the personal side, in the opinion of the group and seedbed directors, the students are passionate about traveling and participating in congresses, as they consider that these spaces strengthen their future professional experience (Figure 5):

**Figure 5.**  
Motivations of the students according to the directors of groups and seedbeds.



Source: Own elaboration based on interviews.  
Note: the figure appears in its original language.

**CONCLUSIONS**

The IS are an appropriate strategy for strengthening the research mission at the HEI; however, the absence of a defined policy and clear goals on the part of the top management can generate, in the opinion of the interviewees, a

distortion of the experience and functioning of the groups. Hence, one of the main challenges for the HEI revolves around the articulation of its efforts.

In terms of communication strategies, the role of social networks and expedited media in the consolidation of IS is undeniable, especially because they make it possible to break down the traditional barriers of research formality. In addition, indirectly, according to the interviewees, they generate social links between the actors of the collectives.

There are still ghosts related to high demands or previous knowledge within the students, which, according to the participants, becomes a barrier to the massification of participation in the IS. In addition, given the majority nature of the night shift, it is imperative that teachers and directors generate strategies for flexibility and/or adaptation to the student population, in order to guarantee spaces for participation.

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