ΣΟΦΙΑ–SOPHIA

Editorial

Research and science: implications for a research teacher in the Colombian system

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Voluminous scientific discoveries are frequently made in different parts of the world. Generally, their divulgence is developed from the academy, and their dissemination processes to research, whose products: articles, books, book chapters, patents, among others, represent a great indicator of development for science, technology and innovation in each country.

Colciencias is the agency in Colombia in charge of registering and recognizing research. Starting in 2001, a process of transition in the dissemination of scientific knowledge began to take place, by designing a whole system of science and technology that classifies researchers, groups, and journals into categories whose benefits confer prestige and recognition to researchers. The constant updating of the evaluation models of the system makes it possible to measure the quality, stability and impact of research (Publindex, 2016). That said, the objective of this text is to point out the implications that a researcher has, in order to reach and stay in the standards of the Colombian system.

If you are a teacher who has been assigned research hours, you are advised to take into account the following procedures: the first thing you should do is to be familiar with Colciencias and its measurement models, which establish all the requirements to be recognized as a researcher or to be member of a group, and which gives you publication guidelines in the light of its own criteria.

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As it was said, Colciencias has been in charge during 18 years of measuring and making visible the research in the country. This being the case, the second thing with which you have to be familiar is the CVlac. This is an application in which the profile of a researcher is constructed through the registration of all their academic and research activity: names and surnames, studies performed, class hours taught, degree works under your direction, books and published papers, among other items. Next, it will be needed to identify the reading materials required to trace the objective to achieve, and the rules of the game you're going to enter; understanding the measurement model will allow you to set realistic goals to meet, and set the right time to improve your status as a researcher, or that of your group.

Once the measurement models are clear for you, as well as the objective to meet, propose your research topic, organize your work group, and discuss with your team the products to be delivered according to the nature of your research; for this, it is necessary to clearly know about the scores that each product of your research adds, according to the measurement model. Consult the model at the following link: https://goo.gl/AqyN1m

The system proposes a promotion scale between each category; to ascend, the requirements of the model must be met, which are intimately linked with the sum of the scores of each product and the academic degree of each member that has registered in the CVLac, and that have been dragged by the GRupLac. Just as the researcher has a CVLac profile, the research groups also have their own GRupLac profile, which works in the same way, registering the delivery of the products of each member of the group, and this will determine at the time of the evaluation the promotion or not to the next category.

Although the preparation of the product to be delivered is the final part of the investigation, this is the initial part of the disclosure process. That is, once the product is ready, (article, book, book chapter, report, or other), the following is to make a good choice of the medium in which it will be disclosed. The choice of a good journal is a fundamental process, since the visibility and scope of your work depends on it; and finally, the impact. You must learn to identify the dissemination means for your results. Keep in mind the following: a good scientific journal is evaluated through the indexation of its contents in different databases, indexes or institutional repositories. These are the places where scientific literature is found, both articles and undergraduate and postgraduate theses, among other documents. Additionally, a good journal is recognized through the consultation of its impact factor; this can be done in Google Scholar, in the option "statistics," or in the platform "Publish or Perish" by typing the name of the journal or its ISSN, it will immediately show you the impact measure, which is the sum of your published articles divided by the number of citations received, generally, this measurement is made in observation windows of 3 years.

Other options to choose a good journal are: focus (your attention) on the number of published editions, compliance with the declared periodicity, and the name of the publishing entity. In addition to this, another alternative is to review the Colciencias database, or the regulatory bodies of research in each country.

In addition to choosing a good medium, a teacher with hours to investigate should know that half of his commitments as a researcher require good writing skills. This implies asking the following question: How and for what is science done today?

Science today is disseminated through so-called scientific articles in specialized and categorized journals. These are writings where the findings of an investigation are disseminated; they contain approximately 20 to 25 pages, they are usually accompanied by graphics, abundant quotes in parentheses, and they are thoroughly reviewed by pairs.

The writing of articles is a decisive practice in the academic field, the recognition of a researcher is consolidated by the number of citations that are made of their products, which is known as the Index h [1], this criterion changed the form of evaluating the scientific quality of publications; previously, what was measured was the number or quantity of articles published; nowadays, the citation is evaluated, this implies that an article that reaches a high index is because it has served as an input to the scientific community; therefore, it is a document that brings knowledge to the discipline and confirms the validation of scientific knowledge. Mireya Cisneros and Giohanny Olave assert it this way:

> Nowadays, for example, although the presentations at events are exposed orally and with the help of images, there remains a written text as a record, and only that way can the communicated knowledge be subsequently cited in the seriousness of a new science-bearer text (Cisneros and Olave, 2008: 122).

Making a scientific article can cost a researcher one or two years of work: one and a half of field work by gathering information, analyzing, discussing results and conclusions; and finally, about six months preparing the product to be published. This means that if you are going to invest so much time and effort in a process, it deserves to be fulfilled through an appropriate means. Keep in mind that the time of a good editorial process is estimated between six months and a year; a year in which it will be revised again, strongly criticized by other colleagues, to finally arrive at the best version of the text.

You can avoid stagnation for several months in an editorial process if you have previously read the rules of the journal in which you have decided to postulate your manuscript, write down your text in light of the standards; do not improvise, do not invent a new structure, send the graphic material with an adequate resolution, use the IMRAD structure if the text is the result of research (introduction, materials and methods,

results and discussion); or a less rigid structure if it is a reflection; and clearly express the innovative component of your research, this will avoid possible failures.

Beyond all the above, there are other factors that contribute to creating the profile of a research teacher. In addition to knowing the research processes, their respective products, scores and forms of disclosure, the teacher must adopt the new information technologies available today, which were developed in order to systematically facilitate the measurement of impact indicators.

Some of these technological developments are: First, the creation of a profile in ORCID. This is a system that provides a digital identifier that distinguishes it from any other researcher and, through the submission of manuscripts and research products, supports the automated links between you and your professional activities, ensuring that your work be recognized. Second, register your data as a researcher in *Research ID*; this is a system that retrieves and stores your data as a researcher, so that you are always recognized in the same way on the internet. For example: if your name is Juan Perez Arrieta, and suddenly you recognize another Juan Pérez on the internet, then you must perform the standardization of your signature by personalizing it with the second surname in the *Research ID*, as follows: (Pérez-Arrieta, J.), and thus avoid that the cites that you receive in all your academic production get lost. In the same way, the standardization of publishing institutions should be carried out, since they are placed in different ways by researchers, and this causes some inconveniences at the time of citing. Third, you must create your academic profile in Google Scholar, so that this system also be able to recognize you as a researcher through the movement of cites to your work; creating a profile in Scholar contributes to knowing its impact factor easily by entering the name of the researcher in “statistics”; this way, it will be displayed our academic universe, ordered from highest to lowest publication time, and accumulating the citations of each work.

Finally, one of the most important aspects that investigators must cultivate is patience to collect the fruits of their harvest. Some investigative processes are not so agile; hence, some researchers manifest disagreements in the editing times, taking into account, as inferred by Ambrosio (2018), that they are trapped in a machinery that needs their publications as oxygen for their own survival, but in some cases, it is independent of its quality and, in particular, its relevance. Many researchers infer that 50% of the works will only be read by the coauthors, reviewers and editors of the journal, making it clear that there is a flaw in the system in relation to scientific articles, which has to do with the dedicated effort and time versus the reward.

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The Index h is the balance between the number of publications and the citations to these; the formula that allows this measurement was postulated by Jorge Hirsch.