



Scientific research as a development for professional activities

La investigación científica como desarrollo de actividades profesionales

A pesquisa científica como desenvolvimento para as atividades profissionais

Ingridy Tayane Gonçalves Pires Fernandes^{1*}

ORCID: 0000-0002-9334-6857

Priscila Oliveira Fidelis dos Santos²

ORCID: 0000-0001-5427-3379

Márcia Zotti Justo Ferreira²

ORCID: 0000-0001-7388-3535

Pérciles Cristiano Batista Flores³

ORCID: 0000-0002-0486-045X

Plínio Regino Magalhães⁴

ORCID: 0000-0002-9334-6857

Keila Martins da Conceição⁵

ORCID: 0000-0003-0432-1509

Lucilení Narciso de Souza⁶

ORCID: 0000-0002-5330-5727

Solange Aparecida Caetano⁷

ORCID: 0000-0003-3294-202X

Elaine Aparecida Leoni⁷

ORCID: 0000-0003-0700-8606

Anelvira Oliveira Florentino⁸

ORCID: 0000-0001-8628-0565

¹Universidade Anhembi Morumbi. São Paulo, Brazil.

²Faculdade Sequencial. São Paulo, Brazil.

³Hospital Santa Cruz. São Paulo, Brazil.

⁴Centro Universitário Ítalo Brasileiro. São Paulo, Brazil.

⁵Caregiver. Boston, United States.

⁶Centro Universitário Anhanguera de São Paulo. São Paulo, Brazil.

⁷Sindicato dos Enfermeiros do Estado de São Paulo. São Paulo, Brazil.

⁸Universidade Estadual Paulista. São Paulo, Brazil.

*Corresponding author: E-mail: ingridy_polao@hotmail.com

Abstract

The constant changes in the labor market have increasingly demanded professional qualification of people in their organizations and contributed to the relevance of investigations into the understanding of the Professional Development phenomenon. Thus, this study aimed to reflect on scientific research as a means of professional development of the individual in organizations. The result of this study identified Science, Technology and Innovation, in the contemporary world scenario, as fundamental instruments for personal and professional, economic growth, job and income generation and the democratization of opportunities.

Descriptors: Scientific Research; Professional Development; Qualification; Labor Market.

How to cite this article:

Fernandes ITGP, Santos POF, Ferreira MZJ, Flores PCB, Magalhães PR, Conceição KM, Souza LN, Caetano SA, Leoni EA, Florentino AO. Scientific research as a development for professional activities. Glob Clin Res. 2021;1(1):e12.

Chief Editor: Caroliny dos Santos Guimarães da Fonseca

Executive Editor: Kátia dos Santos Armada de Oliveira

Submission: 01-31-2021

Approval: 02-14-2021



Resumén

Los constantes cambios en el mercado laboral han exigido cada vez más la calificación profesional de las personas en sus organizaciones y han contribuido a la relevancia de las investigaciones sobre la comprensión del fenómeno del Desarrollo Profesional. Así, este estudio tuvo como objetivo reflexionar sobre la investigación científica como medio de desarrollo profesional de las personas en las organizaciones. El resultado de este estudio identificó a la Ciencia, Tecnología e Innovación, en el escenario mundial contemporáneo, como instrumentos fundamentales para el crecimiento económico personal y profesional, generación de empleo e ingresos y democratización de oportunidades.

Descriptores: Investigación Científica; Desarrollo Profesional; Calificación; Mercado de Trabajo.

Resumo

As constantes mudanças no mercado de trabalho têm demandado cada vez mais qualificação profissional das pessoas em suas organizações e contribuído para relevância das investigações sobre a compreensão do fenômeno Desenvolvimento Profissional. Assim, o presente estudo teve como objetivo realizar uma reflexão da pesquisa científica como meio de desenvolvimento profissional do indivíduo nas organizações. O resultado desse estudo identificou a Ciência, a Tecnologia e a Inovação, no cenário mundial contemporâneo, como instrumentos fundamentais para o desenvolvimento pessoal e profissional, o crescimento econômico, a geração de emprego e renda e a democratização de oportunidades.

Descritores: Pesquisa Científica; Desenvolvimento Profissional; Qualificação; Mercado de Trabalho.

Introduction

When an individual enrolls in a higher education course, he predicts that he is looking for some knowledge to prepare for a professional career or to complement the knowledge he already has on a certain subject.

Evidently, there are also those who start higher education in search of new knowledge, without necessarily being concerned with the trends in the labor market.

Science is more present than we imagine, therefore, the culture that only higher education was known only for the medical course, currently shows how much scientific knowledge is present in all areas. However, it is important to remember that the student starts a new process in his life that will require him to develop a great deal of autonomy.

Therefore, in the first place, the student must be aware that, henceforth, the result of the process depends fundamentally on himself. Whether by their own psychic and intellectual development, or by the very nature of the educational process at this level, the learning conditions change in the sense of demanding from the student greater autonomy in the realization of learning, greater independence in relation to the subsidies of the teaching structure and institutional resources that are still being offered. The deepening of scientific life demands from the student a posture of didactic self-activity that will be, without a doubt, critical and rigorous¹.

Researcher² says in his study that education is an important attribute for the citizen who lives in the 21st century and integrates the knowledge society, founded on literate culture, on the domain of digital technology and on the economic organization influenced by international financial flows.

In the educational context, graduation has the clear purpose of training a professional. The lato sensu post-graduation, in turn, is focused on specialization and professional updating. And even the stricto sensu post-graduation, which was initially focused on the training of masters and doctors, with the creation of professional master's degrees, in accordance with Capes Normative No. 17/2009 (Coordination for the Improvement of Higher Education Personnel), began to assume a clearer role in personal development as well³.

In this sense, the concept of PD (personal development) is related to a professional's maturing and the reflection and improvement of their know-how, derived from formal and informal learning experiences³.

However, this study asks the following question: Why is investing in professional development since graduation so important? Obviously, the development of any country is related to the investment of capital in the sector. Innovation, research, scientific training, in the end, is a public good.

It is recognized that the autonomous and self-taught attitude should be a constant in the individual's professional life, after he finishes his studies. This is because scientific knowledge is constantly changing. New technologies and discoveries lead to new work practices, and professionals need to know how to look for them on their own.

The methodology of scientific research deals with a type of reading called informative, which aims to collect information about the field of research or work, from the moment the student graduates¹.

It is important to understand that the scientific methodology will contribute not only for the individual to



become self-taught, learning to read and select the best material that fits their work in Higher Education and their future professional life. It will train the individual to find evidence of the problems he can solve.

Evidence-based professional activity

Science in Brazil stabilized from 1900 as a profession. Before that date, the scientist necessarily needed to dedicate himself to teaching, production, and service activities, in addition to research. Along with this reality, universities such as the University of São Paulo (1934) and the University of the Federal District (1935) emerged, which became the dominant place of scientific development⁴.

In professional practice, the best way to get to know a phenomenon is to understand its cause. Evidence Based Practice (EBP) is a research approach widely used in the health sciences. Authors⁵ say that EBP must be systematized in stages and that the professional, in the search for evidence, must have the skills to:

- Analyze in detail the context of the practice, looking for evidence.
- Investigate the problem situation.
- Be aware of research methodologies and seek previous research on the problem.
- Relate previous scientific research to the problem at hand.
- Act on the problem, controlling and evaluating your actions.

EBP is a method that seeks to solve problems in the most efficient way possible, aiming at the patient's well-being and avoiding waste. It has a strong relationship with the content of scientific methodology, because, in addition to the individual needing to know how to conduct an adequate reading, he needs to be a researcher, not only to understand and analyze the problem situation, but also to search for articles and books that provide information about the researched case.

Study⁶ presents an organizational chart of procedures in EBP.

- Clinical decision making
 - Research, diagnostics, probability assessment.
 - Joint discussion, analysis of possible decisions.
 - Analysis of the efficiency and effectiveness of the conducts.
- Access to scientific information
 - Internet (Cochrane Database of Systematic Review).
 - Electronic database: MEDLINE, LILACS, EMBASE and others.
- Evaluation and validation of scientific information
 - Know the methodology of scientific research.
 - Guide yourself through the "Classification of Scientific Evidence":
 - 1- Systematic reviews.

Scientific research as a development for professional activities

- 2- Randomized clinical trials.
- 3- Cohort/case-control studies.
- 4- Series of cases.
- 5- Expert conferences/opinions:
 - Integrate findings into decision-making processes.
 - Analyze the levels of efficiency and effectiveness of the work.

Study⁷ reports that the student, upon entering a university, has the technical skills to prepare an article, a project, a critical review, what he needs is intellectual training for future academic productions.

In this globalized and interconnected world, young people enter Universities with a pre-acquired technological development, which facilitates the learning process, on the other hand, when most young people enter Universities, they have little literary knowledge. Facts like this make it impossible for them to develop texts, quality scientific articles.

Knowledge is something very continuous. It is necessary to be frequently reading articles and books, in addition to participating in workshops and lectures to have knowledge in constant transformation. Therefore, students who intend to acquire updated knowledge or stand out in the profession must dedicate themselves to scientific production.

Also, within the framework of the discussion on scientific knowledge, authors⁸ claim that school education must overcome the commonsense barrier and reach the logical and categorized structures of scientific knowledge.

Therefore, since graduation, the individual must develop the habit of reading and critically evaluating articles and publications in their area, understand the act of research and be interested in research. In addition to establishing the habit of participating in seminars and discussion forums, as this increases the chance of new learning and consequent improvement in your professional quality.

In this way, this kind of intellectual work can guarantee discoveries and the development of new theories. With science, it is possible to get rid of prejudices and structure new ways of thinking in contemporaneity.

Scientific Methodology and Problem Solving

In the 21st century, the current situation of work is characterized by constant changes, instability, occupational transitions and creativity, so that workers can establish new patterns of relationship to offer their services and solve problems⁹.

It is known that one of the parts of a scientific research is the elaboration of a problem, which comes from the observation of a given phenomenon. The scientific method aims to equip the student to develop critical thinking and incorporate research skills that should be transformed into professional attitudes.

According to authors^{9:26}, "[...] problem is a difficulty, theoretical or practical, in knowing something of real importance for which a solution must be found. Defining a problem means specifying it in precise and exact detail".

After formulating the problem, it is necessary to follow the planned steps, because, before it is considered appropriate, it needs to be analyzed under the aspects of feasibility, relevance, novelty, feasibility and opportunity¹⁰.

The formulation of the problem is linked to the capacity for reflection that we must have with the subject and object of research. Education research¹⁰ believes that the individual needs to learn to learn, and that this is an autonomous skill. It defines five conditions for learning that directly integrate life:

1. You only learn what you practice.
2. It is not enough to practice, there must be a conscious reconstruction of the experience.
3. You learn by Association.
4. You never learn a single thing.
5. All learning must be integrated into life.

When the student follows the steps of scientific research, defining a problem, preparing a research question, identifying objectives and variables, he starts the autonomous learning process, because the ritual of scientific methodology directs, motivates, and focuses on learning and the result is the development naturally in your professional activity.

Final Considerations

The present research was able to reach the proposal and present the reflection of the individual's need to invest in scientific research for a promising professional future.

Many times, our busy life ends up not receiving the social changes that we have gone through in a broad way; therefore, it is necessary to have a more critical and displaced look to be able to elaborate new perspectives of social transformation.

In this sense, scientific production has a privileged position. Through many studies, tests and analyzes of society, it is possible to identify what changes we are going through and infer about the consequences for the future.

Thus, it is noted that research contributes to the generation of knowledge and the development of humanity. Scientific research is important in our lives as it helps us to have a better quality of life, as it was through science that many diseases were eliminated, therefore, it enriches the individual's professional development in his/her professional and personal career.

References

1. Severino AJ. Metodologia do trabalho científico. São Paulo: Cortez; 2000.
2. Bogossian T. As políticas públicas e educação brasileira: um desafio moderno. *Glob Acad Nurs.* 2020;1(3):e62. <https://doi.org/10.5935/2675-5602.20200062>
3. Pirola SBF, et al. A importância da iniciação científica na graduação de Medicina. *Revista Corpus Hippocraticum.* 2020;1(1).
4. Atallah NA, Castro A. Evidências para melhores decisões clínicas. São Paulo: Centro Cochrane do Brasil; 1998.
5. Gama CS. Saúde baseada em evidências: farmacêutico clínico. *Revista Einstein [Internet].* 2020 [acesso em 31 jan 2021];8:169-71. Disponível em: http://apps.einstein.br/revista/arquivos/PDF/1912-EC_V8_N4_p169-71.pdf
6. Mourão L, Monteiro AC. Desenvolvimento profissional: proposição de um modelo conceitual. *Estudos de Psicologia.* 2018;23(1):33-45. <http://dx.doi.org/10.22491/1678-4669.20180005>
7. Sousa RM, Echeverría PG, Costa LSO. Educação Profissional para Jovens e Adultos: do conhecimento cotidiano ao conhecimento científico, um caminho de superação? Curitiba: Anais do XIV Encontro Nacional de Ensino de Química, 2008.
8. Ambiel RAM, Campos MI, Campos PPT. Análise da produção científica brasileira em orientação profissional: um convite a novos rumos. *Psico-usf [Internet].* 2017 [acesso em 31 jan 2021];22(1):133-145. Disponível em: <https://www.redalyc.org/articulo.oa?id=401050855013>
9. Marconi MA, Lakatos EM. Técnicas de pesquisa: planejamento e execução de pesquisas, amostragens e técnicas de pesquisa, elaboração, análise e interpretação de dados. 7. ed. São Paulo: Atlas; 2008.
10. Dewey J. Vida e educação. 10. ed. São Paulo: Melhoramentos; 1978.

