

Advisor-advisee relationship. The multiplier knowledge¹

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ABSTRACT

The article captures the essence of the advisor-advisee relationship as the fulcrum of the graduate program, and its influence and implications in the present formation process of new researchers.

Key words: Interpersonal Relations. Mentors. Education, Graduate.

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The word “mentor” comes from the Greek word for “to advise”, and from the Indo-European root meaning “to think”. Therefore, “mentor” is a person who gives advice or counsel.

The words “mentor” and “mentee” come from the character Mentor in Homer’s “The Odyssey”, which tells the story of Ulysses. During the Trojan War, Ulysses left his son, Telemachus, in the care of his best friend, Mentor. Many years had elapsed since the Trojan War ended, but Ulysses had not returned home. So, Telemachus departed, searching for news of his father, and during the journey, Athena, the goddess of wisdom, intellect and invention, assumed the form of Mentor to provide guidance and support to Telemachus. The vicissitudes of that journey led to many difficulties and situations, giving rise to a mentor-mentee relationship, which resulted in Telemachus’ personal growth and development.

This story explains the origin of the word “mentor” and summarizes the concept of the mentor-mentee relationship. The advisor-advisee relationship is similar in many respects to the mentor-mentee relationship.

The consensus definition of “academic advising”, defined by the joint committee of the Brazilian Academy of Sciences, Brazil National Academy of Engineering and Brazilian Institute of Medicine, is as follows: “Academic advising is the dynamic, mutual, professional and personal relationship between the academic advisor and student.

Graduate programs are doubtless based on the advisor-advisee dyad, which determines the growth and expansion of graduate courses, and advising demand; it is an essential part of the graduate educational process, and also the most complex and delicate relationship to be managed in a graduate program. According to Grant¹, advising “is not only concerned with the production of a good thesis, but also with the transformation of the student into an independent researcher.”

Graduate programs concentrate almost all Brazilian research production, and aim to provide professional education to high-level researchers, ensuring high-quality standards in education and research. Graduate students are considered potential

researchers in an advanced developmental stage and on the path to scientific autonomy, but who still need academic guidance, which justify advising activities as effectively necessary^{2,3}.

The knowledge-building process is not an isolated process, but rather depends on the interaction between the academic advisor and student². In this way, academic advising is characterized by the support and guidance given to the student during the various stages of the academic qualification process, and is not restricted to the reading and reviewing of the manuscript, dissertation or thesis^{2,4}.

The formation of new researchers involves different stages including development of Declarative Knowledge (theory, literature and evidence) and Procedural Knowledge (methodology, analysis and writing), both leading to the Conditional Knowledge (research design and publication) and, finally, to the Functional Knowledge (independent researcher)⁵. However, in addition to the formation of an independent researcher, there is a stage of fundamental importance, which was not described, and we designate it Multiplier Knowledge. It consists in the formation of new leaders to be recruited into different research environments, through the use of methods that stimulate the different intellectual skills and abilities of students.

In this way, the thesis defense becomes only a small part of the formation process, and the transformation of the student into an independent researcher is associated with the capacity for incorporation of human resources, and funding availability to ensure continuity of research projects, and stability and growth of research groups, enabling the recruitment of researchers.

The inclusion of high-level researchers into research groups is of national importance, leading to a greater regional homogeneity of active research groups, and increasing Brazilian scientific productivity.

Other than the technical stages of the formation of a researcher, the advisor-student relationship include the following steps:

1. Advisor-student selection process: Basically, it represents the advisor’s capacity to attract and inspire the student

through his or her line of research. Students are more likely to seek out advisors with high academic productivity, working on high-impact research. When a student selects a graduate program and an advisor with attributes that may offer many operational benefits, most probably this student is seeking just the degree, and will have difficulty in conducting research. Leite-Filho and Martins³ demonstrated that advisors value the technical skills of a student, while advisees emphasize the affective and personal aspects of the advisor.

2. Student selection process: This is the key to success in a graduate program and advisor-student relationship. When the selection of a graduate student is adequate, there is a mutual agreement to fulfill previously established goals and the student is more committed to the Graduate Program directives. When a relationship has been established between the academic advisor and student, as a result of having worked together previously in activities such as Senior Thesis or research training, the probability of success of a student is higher. Frequently, reciprocity and complementarity with a communion of ideas are observed in the academic world, and this may explain the lack of power and conflict in the relationship advisor-student. The quality of the course of study and thesis is determined by the alignment between the academic advisor and student, and focus on the generation of knowledge, according to a constructive strategy established by the advisor⁶. When these players do not do their part, there can occur rupture in their relationship that negatively influences the constructive process and quality of the graduate work.

3. Applying the pedagogical model of each advisor: It involves a set of strategies and behavior, and determines the degree of enthusiasm, participation and involvement of the student in the graduate program⁷. The student learns to advise from his advisor. The Graduate Program must search for a model that serves as the basis for the expansion of its research lines (central focus of the Graduate Program), aggregating the work developed at the university and research institutes, as well as new challenges.

Moreover, academic advising presupposes the indication and monitoring of a series of activities, such as reading assignments, directed study, research training, and attending classes or courses that may increase or complement the knowledge of the student in a specific area of interest². The advisor must seek a balance between dependence and independence in the advising relationship, avoiding extremes such as excessive dependence or independence of the student⁸. The goal is the establishment of a synergic model, which includes the functional knowledge, multiplier knowledge, as well as constructivism, resulting in an increase in the cognitive and affective capacities of the students that can be achieved in a formal or informal manner.

Academic advising includes the guidance and supervision of a student in the design and development of his or her research work, thus involving all the stages of scientific investigation, critical analysis, discussion of results, and the final writing of the thesis or dissertation and scientific papers². This is a task that must be in the hands of qualified faculty members having ample knowledge in well-established research fields, a relevant body-of-work (quality- and quantity-wise), and who are well-acquainted with the organizational and operational aspects of the graduate program. These characteristics together with the ability to stimulate creative and competitive scientific research play an important role in the whole educational process, development of

an efficient relationship between advisor and advisee, and the professional growth of the later.

CAPES guidelines requires that a master's student: have a good knowledge of Portuguese, be able to read technical texts in English and write short texts in this language, have good grades in courses taken, be trustful, responsible, punctual and organized, to follow deadlines, be self-motivated, know how to work in a group and independently, collaborate with undergraduate, master's and doctoral students in research, and, preferably, work full time in graduate work and be knowledgeable in the chosen area of research.

CAPES expects that a doctoral student: be able to write a thesis proposal and write scientific papers in English, be critical of the research work, be able to formulate problems and present solution in a rigorous manner, perform a review of the literature, have initiative and the ability to find new related bibliographic material and compare them to research being developed, show initiative to actively participate in research projects with colleagues and faculty members, and to assume responsibilities associated with these projects.

The obstacles to the academic advising process are:

1. Analysis of the performance of graduate programs, resulting in graded evaluation, points to the importance of the advisors;
2. Increase in responsibilities: advising activities go beyond the limits of the advisor-advisee relationship, becoming more important and related to institutional matters;
3. Resolutions and directives are not fulfilled (lack of faculty preparation, excessive number of students, and reduce number of advisors)³.
4. Some of the evaluation criteria used by CAPES: mean time-to-degree, advisor-student ratio, completion rate, and dropout rate;
5. Unqualified advisor³;
6. The writing ability and structuring of the research work by the advisees are evidence of how well the advising activities qualify the advisees for authorship;
7. Amount of time advisors dedicate to students is not sufficient;
8. The autocracy that dominates relations within graduate programs complicate the efficient relationship between advisor and advisee^{3,6}.

Based on the above, one can affirm that the key element of a Graduate Program is the advising process^{3,9}. The relationship advisor-advisee is complex, diversified and, sometimes, hard to define, and yet it is not only extremely important during graduate school, but absolutely essential as a part of the whole process. There is a range of pre-conditions for the successful advising, from competence to empathy, which are determining factors in the success of a graduate student, and have implications that are equally significant to both the advisor and Graduate Program. Professional humility, disposition, and mutual comprehension are also part of the relationship².

Academic advising consists of a close monitoring of the student by the advisor, with a varying degree of involvement. The advisor intervenes depending on the autonomy and research experience of the student, and the student's experience will influence the need of guidance from the advisor. The availability of the advisor is also essential, which poses a limit to the number of advisees per advisor.

The relationship advisor-advisee results in scientific knowledge consolidation. However, for the process to be productive, it is necessary that both advisor and advisee know their prerogatives, building through a constructive relationship an environment conducive to the generation of knowledge³. Factors that may interfere with the advisor-advisee relationship: faculty

members ill-prepared for advising, excessive number of students, lack of advisors with time for advising, autocracy, unrealistic expectations of both parties, excessive dependence, cultural barriers, and competition between advisor and advisee³.

Therefore, some of the qualities that are indispensable to the advisor, besides knowledge and experience, are: professionalism, interest, flexibility, patience, communicability, creativity, respect, honesty, responsibility, organization skills, respect to peers, and participation in an international network of researchers⁵⁻⁹. The advisees, in their turn, must be: motivated, objective, curious, enthusiastic, ambitious, respectful, self-disciplined, and committed^{2,9}.

It is important to remind that the benefits of the relationship are not one-sided. The advisee goes through a process of personal, professional and academic growth, and experiences self-assurance, direction, development of critical thinking, independence and self-confidence. For the advisor, there is an increase in personal satisfaction, stimulus, in the opportunity to keep up-to-date with current research, in the ability to attract new collaborators to work in current and future projects, in addition to creating new opportunities for “planting seeds” for future generations in a line of research⁶⁻⁸.

The coexistence relationship is of fundamental importance. It must be based in partnership, consistency, mutual respect and commitment of both parties^{12,13}; the stimuli, challenges, and proposal of new ideas and lines of research arise from it. If the relationship is a healthy one and reflects the state of matters of the graduate program, it certainly will be positive and fruitful, leading to social responsibility and citizenship⁴.

“If you want one year of prosperity, grow wheat; if you want 10 years of prosperity, grow trees; if you want 100 years of prosperity, educate people” - Chinese proverb

“It is not the strongest species that survive, nor the most intelligent, but the ones most responsive to change” - Charles Darwin

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