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STUDENT-UNIVERSITY-ORGANIZATION CURRICULAR INTERNSHIP ISSUES

QUESTÕES DE ESTÁGIO CURRICULAR NA RELAÇÃO ESTUDANTE-UNIVERSIDADE-ORGANIZAÇÃO

CUESTIONES PASANTÍA CURRICULAR EN LA RELACIÓN ESTUDIANTE-UNIVERSIDAD-ORGANIZACIÓN

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ABSTRACT

The curricular internship is a component of undergraduate and graduate curricula that, in summary, aims for students to apply course learning, theories, and experiences to actual professional life. The curricular internship is part of undergraduate curricula with specific objectives and interacts with organizations in general. Organizations change, for instance, technological innovation, human resource management, market positioning, economic situation, and environmental behavior. Consequently, the curricular internship, to some extent, is impacted by the organizations positioning and behavior. This paper addresses and discusses a set of internship issues and use cases, looking forward to comprehending its evolution and adaptation to actual organization needs and market scenarios. The curricular internship aspects addressed are its organization, management at university programs, its relation to the accreditation process, and the impact on student's academic and professional formation.

KEYWORDS

Curricular Internship. Internship Education Regulation. Internship in Brazil. Curricular Internship Ecosystem.

· 266 ·

RESUMO

O estágio curricular é um componente dos currículos de graduação e pós-graduação que, em síntese, permite que os alunos apliquem o seu aprendizado, as teorias e as experiências do curso à vida profissional real. O estágio curricular faz parte dos currículos de graduação com objetivos específicos e interage com as organizações em geral. As organizações mudam, por exemplo, em termos da inovação tecnológica, gestão de recursos humanos, posicionamento de mercado, situação econômica e comportamento ambiental. Consequentemente, o estágio curricular, em certa medida, é impactado pelo posicionamento e comportamento das organizações. Este artigo aborda e discute um conjunto de aspectos e questões de estágio curricular e casos de uso, procurando compreender a sua evolução e adaptação às necessidades reais das organizações e cenários de mercado. Os aspectos do estágio curricular abordados são a sua organização, a gestão nos programas universitários, a sua relação com o processo de acreditação e o impacto na formação acadêmica e profissional do aluno.

PALAVRAS-CHAVE

Estágio curricular. Regulação educacional de estágio. Estágio curricular no Brasil. Ecossistema acadêmico para o estágio.

RESUMEN

La pasantía curricular es un componente de los currículos de graduación y posgrado que, en síntesis, permite que los alumnos apliquen su aprendizaje, las teorías y las experiencias del curso a la vida profesional real. La pasantía curricular es parte de los currículos de graduación con objetivos específicos e interactúa con las organizaciones en general. Las organizaciones cambian, por ejemplo, en términos de innovación tecnológica, gestión de recursos humanos, posicionamiento de mercado, situación económica y comportamiento ambiental. Consecuentemente, la pasantía curricular, en cierta medida, es impactada por el posicionamiento y comportamiento de las organizaciones. Este artículo aborda y discute un conjunto de aspectos y cuestiones de pasantía curricular y casos de uso, procurando comprender su evolución y adaptación a las necesidades reales de las organizaciones y escenarios de mercado. Los aspectos de la pasantía curricular abordados son su organización, la gestión en los programas universitarios, su relación con el proceso de acreditación y el impacto en la formación académica y profesional del alumno.

PALABRAS CLAVE

Pasantía curricular. Regulación de Pasantía. Pasantía curricular en Brasil. Ecosistema académico para la pasantía.

1 INTRODUCTION

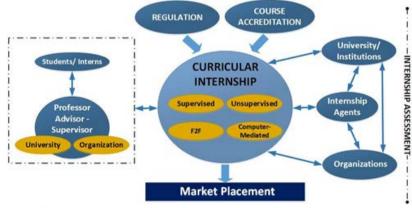
Higher education internship around the world is the period in which students participate in practical activities in organizations so that they can learn more through experiences and the training that organizations offer directed to the area in which the student will work. It is an actual hands-on with an ecosystem involving various interacting agents and components (FIGURE 1).

This work elaborates on the student-university-organization interrelated issues that compose the curricular internship process aiming for the student to achieve a degree of professional expertise while in the undergraduate period at the university.

It is essential to highlight that internship issues are common ground for students, universities, and organizations worldwide. In most cases, local characteristics are obviously present, including the accreditation process and the level of regulation involved in the local process. Organizational and market aspects tend to be global as a reflex of the globalization of the economy (MUELLER; OGURO, 2021; ALMEIDA; SANT'ANNA; LIMA, 2022; NAGY; SMITH, 2016).

This paper presents relevant Student-University-Organization internship aspects and related work in the following sections. It highlights some actual higher education cases, organizational issues, and evolutionary aspects of internship programs.

Figure 1 – The Curriular Internship Ecosystem: University, Organization, Interns, Advisory Professors, Supervisors, Agents, Regulation, Accreditation and the Market



SOURCE: This paper's authors

2 STUDENT UNIVERSITY ORGANIZATION INTERNSHIP ASPECTS

Depending on the country, the internship activity can be more or less regulated. In Brazil, law 11,788 of September 25, 2008, is a specific legislation for internships (BRASIL, 2011). Art. 1 defines the concept of internship as:

A supervised school educational act, developed in the work environment, which aims to prepare for the productive work of students who are attending regular education in institutions of higher education, professional education, high school, special education and the final years of elementary school, in the professional modality of youth and adult education. In this paper, we focus on internships in higher education. (BRASIL, 2008, online)

Regarding the course accreditation process (FIGURE 1), the characterization of the internship must be detailed in the pedagogical project of the course and is one of the aspects always evaluated in the accreditation process and by professors and expert evaluators.

The internship characterization, description, and effectiveness evaluation process in most countries is ad hoc work carried out by an accreditation committee, and, in Brazil's case, evaluation is carried out by the Ministry of Education through a specialized accreditation agency (Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira - INEP).

Depending on the course area, the internship can be mandatory or non-mandatory (FIGURE 1). The mandatory internship typically has a well-defined set of procedures and requirements that the university and interns must fulfill (ESTEVES *et al.*, 2018). The non-mandatory internship is an optional activity, adding to the regular and mandatory workload. In this case, students participate in the activities with the organization's and the University's approval and comply with the same procedures as mandatory, except for being considered for diploma purposes.

Many students start the internship at the beginning of the course as not all organizations require it to be realized in the final semesters. In general, the great challenge of the University is to follow and adequately support the students so that they have a good internship experience and are not used as cheap labor in the market but rather as a source of learning.

In Latin American countries, it is common for students to be professionals who work during the day and study at night. In some cases, the search for an internship also occurs, intending to use it as an additional source of funds that helps to supplement the family income.

For the internship, the student submits to the university a plan of internship activities supervised by a professor assigned to this role (FIGURE 1). The university professor advisor has the role of contributing to the student to help him to differentiate a good from a bad internship experience. The organization supervisor has the role of conducting the intern concerning the organization's targets and objectives that must be aligned with the internship's overall objectives concerning the target course and area. Aligning university internship objectives, students' expectations, and organization targets is one of the most challenging issues concerning internship programs. For Roesch (2015, p. 3), "many students are interested in taking advantage of internship opportunities during the course. Others, however, are reluctant to look for internships, considering that the experiences are almost always unsatisfactory."

Differences may appear at the beginning of the internship, disclosing vacancies and selection. Most organizations offer internships requiring students to have previous professional experience, which is surprising given that the internship is possibly the student's first occupational experience. The consequence of this is that the search for approval in a selection process becomes much more time-consuming and exhausting. Not to mention that the remuneration for this position is often considered unfair by students.

According to Zabalza (2015 p. 152) "Organizing an internship is not simply sending our students to practice centers so they can spend time there and do what they can or what they allow them to do".

Although challenging, the curricular internship can potentially be beneficial for universities, interns, and organizations (ISMAIL, 2018). Factors that benefit host organizations with internships include fulfilling corporate social responsibility, gaining new perspectives and technologies, cost savings, and corporate image enhancement (MGAYA, 2014). Universities benefit from curricular internships mainly through the positive effects on students' academic outcomes, interdisciplinary and integrated curriculum practices, and integration with organizations (BINDER *et al.*, 2015; HIDDEN REFERENCE). Interns benefit from internships mainly through the positive effects on employment and career indicators (BINDER *et al.*, 2015).

3 RELATED WORK

Chu (2020) provides a general overview of internships in higher education institutions with basic definitions, objectives, and concepts underlying an internship program. The author also gives his position on how and why internships are effective.

As Rigobello and collaborators (2018) discussed, a supervised or unsupervised curricular internship is an academic approach involving teachers, students, and organization professionals cooperating to improve students' ability to apply their acquired knowledge.

Some issues and difficulties in implementing curricular internships are discussed by Moura, Silva and Araújo (2022) from the perspective of internship coordinators. An overview of the internship concerning organizational issues is addressed by Al-Maskari and collaborators (2014). The authors evaluated several organizations in Oman, considering their significant challenges and the ways to overcome the difficulties.

Zabalza (2015, p. 174) comments that "the formative nature of the practical internship or practices in companies is decharacterized and loses meaning when disconnected from the contents, methodologies, and references made in the course subjects". For this same author, there are two formative needs. One would be training people who will supervise the practical internship in companies. Both people in the company and the professor are assigned the role of guiding the internship. According to Zabalza (2015), this has made this curriculum activity secondary and unimportant. The other need is to train the entire group of professors who attend a course or specialty to take full advantage of this new curricular segment included in the curriculum. It is generally observed that supervisors in organizations do not have time to participate in training for something they consider an addendum to their activity. In addition, research and researchers are valued at universities, and few professors are interested in guiding students in this practice and participating in training courses that plan, monitor and evaluate these activities more frequently and systematically.

4 HIGHER EDUCATION INTERNSHIP USE CASES AND ORGANIZATIONAL APPROACHES

Concerning internships, the relationship between universities and organizations has existed for a long time, especially in countries with a culture of training people and seeking talent for their organizations.

For example, in the analysis of several universities in Mexico done by Reis and Marback Neto (2019), an institution in the business area that works with the so-called dual model stood out. In the dual model, the student studies for one semester at the University and the following semester in an organization, with the cycle being repeated a couple of times. The dual mode model allows the student to learn concomitantly, in practice, with what he studies at the University. This model presents good results for students who develop permanence in the organizations by facilitating their hiring. In a conversation with representatives of Universities, those from Universidad Tecmilenio, based in Monterrey, and Universidad Interamericana, located in Mexico City, said that out of every ten graduates, nine already have a guaranteed job. To Brooks (1995), students who perform extracurricular activities find it easier to develop professionally.

Zabalza (2015) highlights that the focus (reflection-based practices) comes from another way of understanding professional practice: the practical knowledge of professionals is not based on available evidence from academic research but on the good practice of professionals. It is knowledge in action, not academic knowledge.

Organizations in Brazil have internship programs with very distinct design and implementation levels. Some have well-designed internship programs that are systematically developed and have an open and public dissemination approach (BRASKEM, 2020). Nevertheless, some medium and small-size organizations have internship vacancies but need an understanding of the real purpose of the curricular internship objectives. As such, may eventually use the internship as an economical, low-cost way to hire professionals.

Avoiding interns as low-cost professionals for organizations is a challenging issue faced currently by universities with an impact on the regulation and accreditation internship processes. The global economic crisis affecting various countries with high unemployment rates and organizations striving to survive economically puts additional difficulty in handling the situation. The idea that some businesses use internship programs to add capabilities to their teams at little or no cost is conceivable with some compromise. A reasonable compromise is to guarantee or regulate a balanced win-win outcome for both the student and the employer.

5 HIGHER EDUCATION INTERNSHIP REGULATION, MARKET AND EVOLUTIONARY ASPECTS

In Brazil, the internship concept has existed since 1808 with the implementation of higher education in the country. However, only in the following century, after the military dictatorship in the 60s, Law n.11,788 (BRASIL, 2008) modify and regulate the internship in higher education for accreditation purposes. The law defines requirements for organizations and universities, including the provision of constant auditing by public audit organizations such as the federal public prosecutor.

The higher education internship structure at the national level in various countries also includes public and private internship placement and integration agencies as tertiary agents that facilitate the hiring of interns by managing the contracts they make with the organizations (FIGURA 1).

In Brazil, Law 11,788 in its Art. 5 §3 reinforces the role of the integration agencies by saying: "Integration and placement agents will be civilly liable if they appoint interns to carry out activities that are not compatible with the curricular schedule established for each course, as well as interns enrolled in courses or institutions for which there is no provision for a curricular internship." In summary, it is not enough to offer the internship and the university to enroll students supported by an agency. The internship activities must be in alignment with the career that the student has proposed to do. In health and engineering careers, compliance with this requirement is easier because the activities are specific and are more noticeable concerning the course the student takes. In business, there is a complication because students can do more routine tasks, inhibiting them from learning more.

One of the most critical points highlighted by interns is that having formal or informal conversations with supervisors makes the internship more accessible to learning than when there is a physical distance between supervisor and intern. For interns, this aspect helps the student graduate more fully and develop soft skills, which are discussed at each World Economic Forum to encourage young people to incorporate them. Giving and receiving feedback should be a constant activity to avoid a lack of ties and affinity between professionals. Along with supervision, interns assess that the ambiance of the work environment and the physical space favor learning and internship success.

In a study by Santana and Cardoso (2018) on the contribution of the internship to the training of administrators, the analysis of its results included five areas: partnership, obligation, adequacy, opportunity, and support. As such, the importance of the relationship between universities and organizations can be perceived by having them work together to establish congruent rules for internship programs aligned with organization demands for training young university students.

It is crucial to differentiate between the learning process in the classroom and that promoted by the internship, which is the personal and direct experience. Student engagement is significant, so the subjects who are part of the internship process must be available for learning.

Regarding the internship learning cycle, Kolb (1983) mentions that it is composed of four stages: concrete experience; observation, and reflection, which lead to the formation of abstract concepts and generalizations that lead to hypotheses tested in future actions, which, in turn, will lead to new experiences (Fig. 2).

Kolb (1983 *apud* ROESCH 2015, p. 5) emphasizes how much organizations can "gain in contact with the university and with research" and suggests applying a learning model through experience to

the management of problems in organizations." For him, this contributes to problem-solving and decision-making in organizations. This learning model has mainly been widely used in medicine courses and is called PBL (Problem Based Learning). In this model, students do not have a teacher figure but a teacher-tutor to be a facilitator only in the classroom with a maximum of twelve students.

For older teachers, this is a problem because they have gotten used to being the protagonists in the classroom. Currently, we work with the idea that the student is the center of attention in teaching. At Tecnologico de Monterrey (Model Tec21), there is a policy that students work based on projects or results. Furthermore, each semester there is a period for all professors to accompany students working with real problems that companies refer to and participate in.

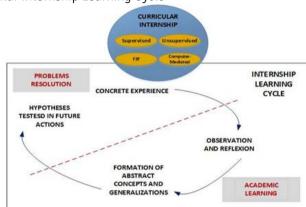


Figure 2 - The Curricular Internship Learning Cycle

SOURCE: Adapted from Kolb (1983 apud ROESCH 2015, p. 5).

One of the authors of this article worked for two semesters in the communication discipline at HIDEN REFERENCE, proposing a challenge at the beginning of the semester. In this activity, an organization prepared all the necessary data to solve a problem and presented it to the students. At the end of the semester, with the company's management present, the students presented the solutions to the problem. It was an activity that was well evaluated based on a concrete experience.

In the last two years, with the context of the COVID-19 pandemic, internships in organizations have also changed. In the health area, many interns were spared from developing activities in the field due to the lack of experience and the high degree of exposure they would have. In the engineering area, many organizations stopped their operations, and, as a result, the interns were laid off.

Another change and potential evolution of internship programs resulting, at least in part, from the COVID epidemic situation is the increased use of a computer-mediated internship approach, as discussed in Bayerlein and Jeske (2018). Computer-mediated internships provide a set of benefits, opportunities, and limitations. In poor or underdeveloped countries, the use of computer mediation potentially allows inclusive access for disadvantaged student groups contributing to reducing the digital divide among countries. A challenge inherent to remote work and computer-mediated internships is the space changed for people who worked in an office and turned to develop internships through remote work, which the organization's supervisor does not directly supervise. Working space evolution in the context of internships may contribute to the rethinking of internship activities, as there will soon be many workers in their homes or other public spaces. From the regulation point of view, computer-mediated internships require a brand new set of definitions aiming conformity to the quality of the process.

Perceptions regarding guidance and supervision show that there were losses in certain situations – the physical distance implying the lack of developed affinity bond. Also, the perception that doubts would take less time to be resolved if the work was in person. In general, there was an understanding that companies – through managers and supervisors – were concerned about their interns. Supervision and guidance could be pre-scheduled, usually with recurring meetings every fortnight or sporadically, when the parties felt the need to communicate. In addition to the situations already mentioned, there was, in some instances, the perception of improvement since interns and supervisors did not work in the same city – in this way, remote work facilitated contact.

The work in Oliveira (2022) indicates what the interns considered as positive in their internship period: having more freedom, more productive use of time, adaptability, and challenging demands. On the other hand, Oliveira (2022) also detected that students considered unfavorable the difficulty with poor communication, obtaining a focus, less engagement, less belonging, a worsening of interpersonal relationships, difficulty with computers, and disconnection from work.

Figueredo (2022) highlights that the most developed skills in the internship were verbal communication, written communication, time management, teamwork, and proactivity. Among the skills students would like to have developed are persuasion, negotiation, a sense of leadership, self-confidence, independence, and practical learning in more than one administration area.

With the changes that organizations have made in recent years through downsizing, mergers, and incorporations, the difficulties of offering internships for higher education have also increased. In parallel, numerous courses and institutions of higher education have been created in Brazil recently. One of the internship obstacles is the traditional thinking that the intern will not contribute to the company's development. Thus, they accept the internship only as a social function. Another difficulty is the access of the university's professor-advisor to the organization and the data to work on the learning process.

6 FINAL CONSIDERATIONS

Higher education internships are a significant challenge for students, universities, and organizations. In Brazil, it is well-known that nothing will be worth it without qualified guidance (including remunerating and valuing the professor who works in the activity) and without an organization that believes the internship student can be the organization's future professional. The student himself needs to understand that the internship is a moment of learning for both non-mandatory and mandatory programs. In the case of mandatory internship, the discipline followed by the teacher throughout the process must be accompanied by the student with significant participation so that the period also reflects what he wants and his purposes and fosters self-knowledge.

The University-Organization relationship needs constant activities, forging long-term collaborations, and not just the offer of a curricular internship. Positive relations include some organizations participating in internship fairs at universities. Others contribute by carrying out hiring simulations so that students can observe how much they still have to develop their experience.

An experience that has worked well in Brazil and other countries is the creation of the so-called "Junior Companies" (Company Jr) in the University, in which students simulate and carry out business activities based on real business problems. These junior companies have contributed to the student's learning. However, it occurs frequently that when the student reaches the second half of the course, he occasionally tends to think he has already senior level, which hinders to some extent the learning process.

REFERENCES

AL-MASKARI, Azzah *et al.* Organizations perception of internship/training program for higher education in Oman. **International Journal of Humanities and Social Sciences** (IJHSS), Conference Edition, Apr. 2014.

ALMEIDA, Marcia Cristina Alves dos Anjos; SANT'ANNA, Ângelo Márcio Oliveira; LIMA, Edson Pinheiro. Internacionalização no ensino superior e o Brasil como case study. **Administração:** Ensino e Pesquisa, Rio de Janeiro, v. 22, n. 1, p. 68-108, jan./abr., 2021. Available at: https://raep. emnuvens.com.br/raep/article/view/1939 Access in: 23 ago. 2022.

BAYERLEIN, Leopold; JESKE, Debora. The potential of computer-mediated internships for higher education. **International Journal of Educational Management**, v. 32, n. 4. p. 526-537, jan. 2018.

BINDER, Jens F. *et al.* The academic value of internships: Benefits across disciplines and student backgrounds. **Contemporary Educational Psychology**, v. 41, p. 73-82, abr. 2015.

BRASIL. **Lei n. 11.788,** de 25 de setembro de 2008. dispõe sobre o estágio de estudantes; altera a redação do art. 428 da CLT, aprovada pelo decreto-lei nº 5.452, e a lei nº 9.394; revoga as leis nºs 6.494, e 8.859, o parágrafo único do art. 82 da lei nº 9.394, e o art. 6º da medida provisória nº 2.164-41, e dá outras providências. Brasília, DF, 2008. Available at: http://www.planalto.gov.br/ccivil 03/ ato2007-2010/2008/lei/l11788.htm Access in: 23 set. 2022.

BRASKEM. **Programa de Estágio Braskem**. Camaçari, 2020. Available at: https://www.braskem. com.br/carreiras-estagio-universitario. Access in: 14 jul. 2022

BROOKS, Linda *et al.* The relation of career-related work or internship experiences to the career development of college seniors. **Journal of Vocational Behavior**, v. 46, n. 3, p. 332-349, jun. 1995.

CHU, Samuel Kai Wah. Internship in higher education. *In*: CHU, Samuel Kai Wah. **Social media tools in experiential internship learning**. Singapore: Springer, 2020. p. 31-45.

ESTEVES, Larissa Sapucaia Ferreira *et al.* Supervised internship in undergraduate education in nursing: integrative review. **Revista Brasileira de Enfermagem**, Brasília, v. 71, Suplemento 4, p. 1740-1750, 2018. Available at: https://www.scielo.br/j/reben/a/hgb8TZmmq8hB6vJ87XtFGWC/ Access in: 26 ago. 2022.

FIGUEREDO, Stephanie Vasques. **Expectativa e satisfação da experiência de estágio acadêmico obrigatório:** análise entre estudantes de Administração da UFBA. 2022. Trabalho de Conclusão de Curso (Bacharelado em Administração) – Universidade Federal da Bahia, Salvador, 2022.

ISMAIL, Zenobia. **Benefits of internships for interns and host organizations**. University of Birmingham, United Kingdom, Technical Report, 2018. Available at: https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/13848 Access in: 14 set. 2022.

KOLB, David. **Experiential learning:** experience as the source of learning and development. 2. ed. Englewood Cliffs, N.J: Prentice Hall, 1983.

MGAYA, Klodwig; MBEKOMIZE, Christian. Benefits to host organizations from participating in internship programs in Botswana. **Asia-Pacific Journal of Cooperative Education**, v. 15, n. 2, p. 129-144, 2014. Available at: https://files.eric.ed.gov/fulltext/EJ1113694.pdf Access in: 16 set. 2022

MOURA, Diego Luz; SILVA, Maria Sergiane Ribeiro; ARAÚJO, João Gabriel Eugênio. Procedimentos e dificuldades de realização do estágio curricular supervisionado sob a ótica do professor coordenador. **Revista Internacional de Educação Superior**, Campinas, v. 8, p. e022016-e022016, 2022.

MUELLER, Beate; OGURO, Susan. Closing the gap: facilitating employability development in international internships. *In*: FERNS, Sonia J.; ROWE, Anna D.; ZEGWAARD, Karsten E. (ed.) **Advances in research, theory and practice in work-integrated learning**. London: Routledge, 2021. p. 191-200.

NAGY, Helga; SMITH, Philip. The era of the global intern? Business undergraduates' perceptions of international internships at a foreign university in Vietnam. In: MANDAL, Purnendu; VONG, John. (ed.) **Smart technologies for smart nations**. Singapore: Springer, 2016. p. 91-108.

OLIVEIRA, Marlos Santos. **Desenvolvimento de competências dos estagiários da EAEUFBa em home office durante a pandemia de Covid-19**. 2022. Trabalho de Conclusão de Curso (Bacharelado em Administração) – Universidade Federal da Bahia. Salvador, 2022.

REIS, Fábio; MARBACK NETO, Guilherme. Uma aposta no Mexico. **Revista Ensino Superior**, v. 20, n. 236, p. 10-13, 2019.

RIGOBELLO, Jorge Luiz *et al.* Supervised curricular internship and the development of management skills: a perception of graduates, undergraduates, and professors. **Escola Anna Nery**, Rio de Janeiro, v. 22, n. 2, e20170298, 2018. Available at: https://www.scielo.br/j/ean/a/HPmPqFpbmCchrpR5f5z7C Gy/?format=pdf&lang=en Access in: 26 set. 2022.

ROESH, Sylvia Maria Azevedo. **Projetos de estágio e de pesquisa em administração**: estágios e trabalhos de conclusão, dissertações e estudos de caso. 3. ed. São Paulo: Atlas, 2015. p.

SANTANA, Fernanda Silva; CARDOSO, André Luís Janzkovski. A contribuição do estágio supervisionado na formação de administradores. **Revista PRETEXTO,** Belo Horizonte, v. 19, n. 1, p. 90-109, jan./mar. 2018.

ZABALZA, Miguel A. **O estágio e as práticas em contextos profissionais na formação universitária**. São Paulo: Cortez, 2015. 1 Ph.D. em Ciência da Computação pela Université Pierre et Marie Curie (UPMC), Paris (1986); Professor da Universidade Salvador (UNIFACS) e internacional na Hochschule für Technik und Wirtschaft des Saarlandes (HTW) (Alemanha) desde 2003; Senior Research Period na Université of Paris-Saclay em 2016; Pesquisador líder dos grupos de pesquisa CNPQ NUPERC (Grupo de Redes de Computadores) e IPQoS (IP QoS Group); Interesses de Pesquisa incluem educação, aprendizado de máquina, Smart Grid, cidades inteligentes (Smart City) e redes definidas por software (SDN): Trabalhou como Professor Convidado na Université Paris VI e no Institut National des Télécommunications (INT) na França, também como palestrante em vários congressos internacionais e empresas no Brasil e na Europa; Membro do Conselho Curador da Fundação de Amparo à Pesquisa do Estado da Bahia (FAPESB), membro do IEEE Smart City Committee e ex-membro do IEEE Smart Grid Research Committee. ORCID: 0000-0003-1310-9366. E-mail: joberto.martins@animaeducacao.com.br

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