ADAPTIVE PROJECT MANAGEMENT PRACTICES APPLIED TO THE PROPOSAL OF NEW ONLINE MASTER'S AND PHD PROGRAMS

PRÁTICAS ADAPTATIVAS DE GERENCIAMENTO DE PROJETOS APLICADAS À PROPOSIÇÃO DE NOVOS CURSOS ON-LINE DE MESTRADO E DOUTORADO

PRÁCTICAS ADAPTATIVAS DE GESTIÓN DE PROYECTOS APLICADAS A LA PROPUESTA DE NUEVOS PROGRAMAS DE MÁSTER Y DOCTORADO EN LÍNEA

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ABSTRACT

Objective: Propose a process that consolidates adaptive project management practices associated with the phase of preparing online Master's and PhD programs proposals for entry at *Brazilian national graduate system* (SNPG).

Approach: The method adopted was the case study, in which seven experts with experience in coordinating and submitting projects for new programs were interviewed. Content analysis was performed by data tabulation.

Relevance: Adaptive practices can facilitate the coordination of graduate programs in the process of entering new online programs, which would lead to the reduction of regional asymmetries found in the offer and evaluation of programs.

Main results: From the analyzes performed, adaptive project management practices and 9 management assumptions were extracted, which were grouped into the categories " Postgraduate Management", " CAPES evaluation system concerning online offer", "Online Postgraduate Education", and "Adaptive project management practices", inducing the proposed process.

Theoretical contribution: The study presents the association of the practical process of preparing and submitting proposals for new programs to administration and strategies concepts and to adaptive project management practices.

Contribution to management: The proposed process mainly contributes indicating adaptive project management practices to be applied during the phase of online Master's and PhD programs proposals for entry at *Brazilian national graduate system* (SNPG).

Keywords – Postgraduate Strategic Management; Adaptive Project Management Practices; Master and PhD; Online programs.

RESUMO

Objetivo do Estudo: Propor um processo que consolide práticas adaptativas de gerenciamento de projetos associadas às etapas da fase de elaboração de propostas de entrada de novos cursos de Mestrado e Doutorado a distância no SNPG.

Abordagem: O método adotado foi o estudo de caso, em que foram entrevistados sete especialistas com experiência em coordenação e submissão de projetos de novos programas on-line. A análise de conteúdo foi realizada por tabulação dos dados.

Relevância: As práticas adaptativas podem facilitar as coordenações de PPGs no processo de entrada de novos programas a distância, o que levaria à redução das assimetrias regionais encontradas na oferta e avaliação de programas.

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Principais resultados: Das análises realizadas, foram extraídas práticas adaptativas de gerenciamento de projetos e 9 premissas de gestão que foram agrupadas nas categorias "Gestão da pós-graduação", "Sistema de avaliação da CAPES referente à oferta online", "Educação pós-graduada on-line", e "Práticas adaptativas de gerenciamento de projetos", o que induziu o processo proposto.

Contribuição teórica: O estudo apresenta a associação do processo prático de elaboração e submissão de propostas de novos cursos aos conceitos de administração e estratégia e às práticas adaptativas de gerenciamento de projetos.

Contribuição para a gestão: O processo proposto contribui com a indicação de práticas adaptativas de gerenciamento de projetos que podem ser aplicadas durante a fase de elaboração de propostas de entrada de novos cursos de Mestrado e Doutorado a distância no SNPG.

Palavras-chave – Gestão Estratégica da Pós-graduação; Práticas Adaptativas de Gerenciamento de Projetos; Mestrado e Doutorado; Cursos On-line.

RESUMEN
Objetivo: Proponer un proceso que consolide las prácticas adaptativas de gestión de proyectos asociadas a las etapas de la fase de elaboración de propuestas para el ingreso de nuevos programas de Máster y Doctorado a distancia en el sistema brasileño de posgrados (SNPG).

Enfoque: El método adoptado fue el estudio de caso, en el que se entrevistó a siete expertos con experiencia en la coordinación y presentación de proyectos para nuevos programas. El análisis de contenido se realizó por tabulación de datos.

Relevancia: Las prácticas adaptativas pueden facilitar la coordinación de los Programas de Postgrado en el proceso de ingreso en programas a distancia, lo que conduciría a la reducción de las asimetrías regionales encontradas en la oferta y evaluación de programas.

Principales resultados: De los análisis realizados se extrajeron prácticas de gestión adaptativa de proyectos y 9 supuestos de gestión, que se agruparon en las categorías "Gestión de posgrado", "Sistema CAPES de evaluación de posgrado en línea", "Enseñanza en línea" e "Prácticas adaptativas de gestión de proyectos", lo que indujo el proceso propuesto.

Contribución teórica: El estudio presenta la asociación del proceso práctico de preparación y presentación de propuestas de nuevos programas a el concepto de administración y estrategia y a las prácticas adaptativas de gestión de proyectos.

Contribución de gestión: El proceso propuesto contribuye a la indicación de prácticas adaptativas de gestión de proyectos que se pueden aplicar durante la fase de preparación de propuestas para el ingreso de nuevos Másteres y Doctorados a distancia en el *sistema brasileño de posgrados* (SNPG).

Palabras clave – Gestión Estratégica de Estudios de Posgrado; Practicas Adaptativas de Gestión de Proyectos; Máster y Doctorado; Cursos en línea.

1. INTRODUCTION

High Education Institutions (HEIs), in general, are under institutional pressure through the ranking systems that have been established worldwide as a form of evaluation (McKee, Mills, & Weatherbee, 2005; Scafuto, Backes, & Maccari, 2017). This institutional pressure forces HEIs to concentrate their interest of offer graduate programs in the South and Southeast Brazilian richest regions, making an asymmetrical distribution into *Brazilian national graduate system* (SNPG) (Andrade, Oliveira, Maccari, & Hollnagel, 2018; CAPES, 2014; Tourinho & Bastos, 2010). To reduce asymmetries between regions, some efforts have been undertaken by the Brazilian government and the *Coordinating Agency for the improvement of graduate personnel* (CAPES Foundation), Brazilian federal government agency under the Ministry of Education (CAPES, 2011).

To externalize this, CAPES Foundation periodically published the *Brazilian national graduate plan* (PNPG) in which there were five axes of actions. The first one axe of actions was written as a purpose of expansion of the SNPG in strategic fields of knowledge, seeking to reduce regional asymmetries in the country. To achieve in needed regions with Master's and PhD programs, CAPES Foundation elaborate some actions, such as *Acelera Amazônia*, *DINTER Novas Fronteiras*, and others (CAPES, 2011), as strategy to increase the reach of graduate education in those regions (Pardim & Maccari, 2014; Abrami, Bernard, Bures, Borokhovski, & Tamin, 2011).

Even though the SNPG presented an increase of 25% offer of Master's and PhD programs during 2010-2012, the leaders of collegiate of fields' knowledges observed that the strategies implemented by CAPES Foundation was not effective, once asymmetries between rich regions and in needed regions was increasing (CAPES, 2013). In the next four-year evaluation of the SNPG carried out by CAPES Foundation, during 2013-2016, it became clearer that the asymmetries were continuing to increase (CAPES, 2018). It appears that isomorphism in HEIs has increased, when institutions start to act in the same way as the ones that are well evaluated (Scafuto *et al.*, 2017).

To contribute to solve this condition, a taskforce was organized to discuss the implementation of a online educational process despite geographic distance of HEIs (CAPES,

2018). As result of this work, in April 2019, the CAPES Foundation published the Act *Portaria n. 90*, which provides regulation to Master's and PhD programs offer based on online education (CAPES, 2019g), as one of the actions focused on reducing asymmetries in Brazil, starting a new phase at SNPG. This regulation has been updated with the standardization of the submission of proposals in the distance modality, that provides the way these programs will be evaluated and how their teaching and support teams should be composed (CAPES, 2019g).

The use of online education in postgraduate programs is in its initial implementation phase in Brazil. Until 2018, the implementation of the online education was considered complex because the regulation was not enough (Costa, Fofonca, & Sartori, 2018). And CAPES' four-year evaluation system is a managerial tool used to identify which regions need more attention in encouraging the creation of new programs or improving existing ones (Mezzaroba & Maccari, 2017). Because of the lack of standards for submitting proposals of online Master's and PhD programs, HEIs rely on international models (Bussler, Hsu, Storopoli, & Maccari, 2019). However, these models are not created and operated along the lines of new CAPES' evaluation system criteria for online Master's and PhD programs (CAPES, 2019d).

The knowledge of the professors and coordinators, combined with pedagogical practices, are not enough to meet the strategic expectations of HEIs and project management can contribute to the strategic management of these institutions (Austin, Browne, Haas, Kenyatta, & Zulueta, 2013). Understanding that each program has its identity, being able to aim to achieve different objectives and meet different types of postgraduate students, that a deadline must be respected for the whole process to happen, and that these possible new programs will depend on resources and investment, the proposal for new online programs could be characterized as a project. This is because each program has unique objectives and characteristics that have to match the deadline approval at *evaluation of new programs proposals CAPES process* (APCN), witch reinforce the understanding that the preparation of the new online program's proposal – pre-approval APCN phase, could be consider as a project, as conceptualized by PMI® (2021), Carvalho & Rabechini (2018), and Kerzner (2017).

Studies on project management practices have presented results that show that the performance of a project goes beyond efficiency until its completion but is connected to the benefits left by it after its delivery and results (Badewi, 2015; Gorod, Hallo, & Nguyen, 2018), which meets CAPES' concern (CAPES, 2018). As exposed by Shenhar & Dvir (2007), observing the five dimensions of success of projects, only one of them is related to efficiency. Thus, the success of projects from this point of view corroborates with the vision of CAPES (2018) and the objectives of Master's and PhD programs. To achieve the success, Shenhar & Dvir (2007) recommend adaptive project management practices as a flexible condition to increase success during and after project's results, what can be a good strategy to overcome the new approval process and entry the program in the SNPG (CAPES, 2019a; Desafios da Educação, 2019; 2021).

Understanding that these project's results can contribute to the economic development of certain regions in Brazil (Paik, 2018) and considering that the phase of preparation of the new online postgraduate program's proposal as a project aiming to achieve the strategic objective of HEIs, we conduct a qualitative case study to propose a process that consolidates adaptive project management practices associated with the phase of preparing online Master's and PhD programs proposals for entry at *Brazilian national graduate system* (SNPG).

2. THEORETICAL BACKGROUND

2.1. CAPES Evaluation System and online Postgraduate Demand

Since 2018 CAPES Foundation improve its evaluation process with a new assessment form, comprising three grand topics: Master's and PhD programs proposals, process' formation, and its impact on society (CAPES, 2019d). This form has been used in the 2021 four-year assessment process and assessed the programs in 2017-2020 quadrennium period and is characterized by measuring the quality of programs in five dimensions: a) teaching and learning; b) internationalization, c) scientific production, d) innovation and knowledge transfer; e) economic and social impact and relevance. In addition, the new form assesses the mission of the program and the process' formation of graduate students (CAPES, 2019m). The three dimensions established by CAPES are distributed representing 33.33% each, leaving an equal weight in the assessment (CAPES, 2021c).

The entry of new postgraduate programs in SNPG is carried out through the approval process of APCN, following the evaluation guidelines regulated by CAPES Foundation,

which include online Master's and PhD programs proposals into process. Figure 1 resumes the CAPES Foundation evaluation process to entry in SNPG (CAPES, 2019e; CAPES, 2019g; CAPES, 2020b; CAPES, 2021b).
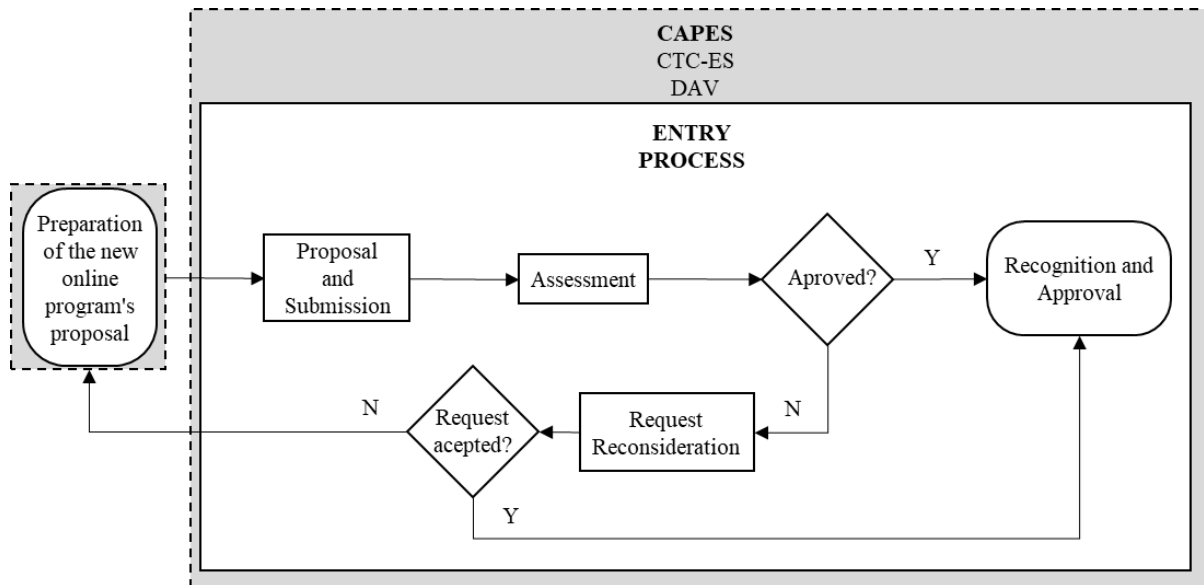

Figure 1. CAPES entry process to access SNPG.
Source: Authors.

In the CAPES entry process, to achieve recognition and approval and offer Master's and PhD program, in any modality of delivery, HEIs necessarily need to have its proposal evaluating based on items criteria. Even these criteria were updated (CAPES, 2021c), they were not adapted to the new online phase of SNPG, as exposed by the Acts *Portaria n. 90/2019*, regulating postgraduate online educations, and *Portaria n. 02/2021*, regulating the structure and support operations poles of the online Master's and PhD program (CAPES, 2019g; CAPES, 2021a).

Despite the innovative character of online postgraduate offer in SNPG, the entry process does not change. It is clear because the programs' objective must be the same, regardless of the deliver modality (Pardim & Maccari, 2014). In addition, other pedagogical challenges must be considered in this evaluation process, as professionals' expertise in online education, technological infrastructure delivery, instructional design, diagramming content, web programming and audiovisual specialist (Alves, 2016). According to Storopoli (2016), some factors influence online education successful: teaching competence, teaching attitude,

collaboration, platform support, expectation of learning, flexibility, quality, relevance, ease of use, diversity of content and activities and satisfaction.

To construct scenarios for online postgraduate delivery, the research community have to consider an evolution of teaching methods, e-learning interaction, and blended learning environment, combining technological approaches, collaborative relationships, effective tools, students' attitude, creation of cognitive and social environment, learning objectives, development of competences and content factors related to delivery and learning. It is also be noted that the student behavior and the need for goals are premises for the teaching-learning process to be considered effective (Bussler *et al.*, 2019).

2.2. Strategic Management of HEIs

In general, the management of postgraduate programs is carried out by professors who are dedicated to education practices and, as a result, tend not to use managerial techniques in their routine. As observed by Austin *et al*. (2013), the adoption of a management model can contribute to the management of programs in strategic administration of HEIs. In order to solve this problem, Maccari, Almeida, Riccio, and Alejandro (2014) developed a Postgraduate Management Model, in which a program could be managed as a strategic managerial element that adopt management tools to achieve goals. It is noteworthy that this model was developed from the comparison between CAPES evaluation criteria and the North American evaluation system (Maccari, Almeida, Nishimura, & Rodrigues, 2009). Over time CAPES Foundation has coming updated its assessment form and HEIs continuing updating strategies to achieve its goals, what reinforces the CAPES Foundation influencing on HEIs strategic management decisions and consequently on educational projects (Teixeira, Maccari, & Martins, 2016).

In the model, the students are highlight that goes through all management elements, becoming an egress who carries with her/him the link with HEIs obtaining the title of master or doctor and, still, is the high-level professional who impacts society (Maccari *et al.*, 2014). This characteristic is in line with what CAPES proposes, in having professionals who promote regional, national, and international economic development (CAPES, 2019d). Over time CAPES has coming updated its assessment form and HEIs continuing updating its strategies to achieve goals, what reinforces the CAPES influencing on HEIs strategic management decisions and consequently on educational projects (Teixeira, Maccari, & Martins, 2016).

2.3. Adaptive Project Management Practices

Considering the strategic link of project (Shenhar, Milošević, Dvir, & Thamhain, 2007) and the appropriate contingency conditions, Shenhar & Dvir (2007) state that it is possible to combine management practices for each project. For the authors, this statement was placed because the projects may be different when compared and, therefore, the way of managing them should not always be the same all time. This adaptive management become accepted by project management professionals and by global market, as exposed by Kerzner (2017) and Carvalho and Rabechini (2018).

Over time, studies have presented other models, understanding that the success of projects depends not only on efficiency and effectiveness, but also on the benefits they leave after they are completed (Chih & Zwikael, 2015). PMBoK$^®$ guide seventh edition (PMI$^®$, 2021) consolidate that project life cycle can be predictive or adaptive in a contingency way. According to the guide, predictive cycles, known as waterfall, are the classic ones, and adaptive cycles can be iterative, incremental, or agile, as requirements are elaborated from time to time. And, as pointed out by Szreder, Walentynowicz, and Sycz (2019), adaptive project approach serves to eliminate the disadvantages and take advantage of traditional and agile project management.

Shenhar & Dvir (2007) do not suggest that the traditional approach should be eliminated. They claim that the adaptive approach is built on it, as many elements of traditional project management remain essential. In this sense, project management practices are an activity that uses one or more techniques and tools to perform (Eder, Conforto, Schnetzler, Amaral, & Silva, 2012). The appropriate combination of management methods indicates maturity and competence, and the analysis of each project can result in the adoption of different managerial practices, or even in the combination between them (Jugdev, Perkins, Fortune, White, & Walker, 2013).

However, it is difficult to differentiate classic practices from agile practices and assess the effectiveness of agile methodologies since their practices are flexible, making it difficult to map the practices used in these methodologies. Organizing a simple list of managerial practice elements, Eder, Conforto, Amaral, and Silva (2015) elaborate a list of project management practices, grouped in activity, techniques, and tools, identifying in which approach (source) they could be used (see Table 1).

Table 1

Elements of project management practices list.

Actions	Source
Adding detail to user stories sooner	Agile
Ask for a time commitment	Agile
Collect requirements	Classic
Control scope	Classic
Control the project plan	Both
Control scope changes	Agile
Project charter	Agile
Identify the work required for the project	Both
Statement of work	Both
Define tasks	Classic
Define project scope	Both
Develop the schedule	Classic
Determine/Estimating target velocity	Agile
Estimate duration of tasks	Both
Estimate activity resources	Both
Identify and dimension gaps	Agile
Finalize the project plan	Classic
Prioritize requirements	Agile
Prioritize the work needed	Agile
Sequence activities	Classic
Measure complexity	Agile
Check scope	Classic
Define product scope	Classic

Tools	Source
Slide show	Both
Minute of meeting	Both
Database	Classic
Sticky notes	Both
Poster	Both
Checklist	Both
Contract	Classic
Drawing/Sketch	Both
Diagram/Graphic presentation/Graph	Both
Itineraries	Both
Email	Both
List	Both
Manual of quality	Classic
Mockups	Agile
Mental models/Mandala/Process maps	Both
Models/Prototypes/Templates	Both
Worksheet/Table	Both
Board/Mural	Both
Report	Classic
Quiz	Both
Project management software	Both

Techniques	Source
Planning poker	Agile
Adjustment of advances and waits	Classic
Analysis of alternatives	Classic
Product analysis	Classic
Reserve analysis	Classic
Performance analysis	Classic
Decision tree	Classic
Balanced scorecard	Both
Business problem definition	Classic
Case point estimates	Agile
Chartering	Classic
Schedule compression	Classic
Delphi Technique	Classic
Group dynamic	Classic
Duration and total work effort	Classic
Earned Value Analysis	Classic
Interview	Classic
Estimate by comparison	Agile
Parametric estimation	Classic
Bill of Material	Agile
Experiments	Agile
Feature cards	Agile
Analogous Estimate	Classic
Inspection/Observation	Classic
Critical Path Method	Classic
Event on node diagram	Classic
Model/Template	Classic
Resource leveling	Classic
Expert opinion/Workshop	Classic
Waterfall planning	Both
Product Backlog	Agile
Program Evaluation and Review Technique	Classic
Meetings	Both
Simulation	Classic
Stoplight reports	Classic
Three-point estimation technique	Classic
Group Creativity Techniques	Classic
Customer Focus Groups	Agile
Daily Scrum Meeting	Agile
Product architecture	Agile
Product feature list	Agile
Product Vision Box	Agile
Project Data Sheet	Agile

Fonte: Adapted from Eder, Conforto, Amaral, and Silva (2015).
Note: Free translation.

2.4. Conceptual Model

The entry process for a new program at SNPG flows as Figure 1 (CAPES, 2021b; CAPES, 2019e), and, for all operationalization of the Master's and PhD program, including online delivery, the successful must be guided by regulations and HEI strategy (Maccari *et al.*, 2014). To achieving the "approval goal", HEIs could use managerial tools as project management practices, due to analogous features between the preparation of the new online program's proposal and a project (PMI®, 2021; Carvalho & Rabechini, 2018; Kerzner, 2017) and its dimensions of success (Shenhar & Dvir, 2007). Figure 2 shows the study model.
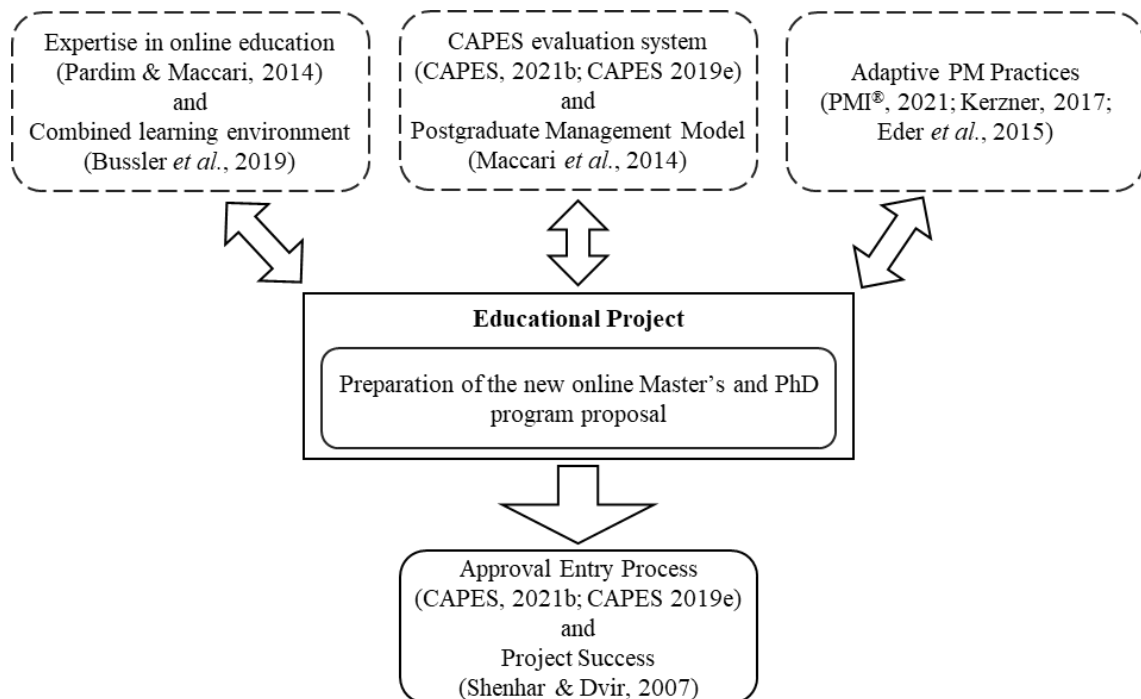

Figure 2. Conceptual Study Model.
Source: Authors.

Summarizing, this conceptual study model considers that the success of educational project, based on elaboration phase of online Master's and PhD proposal program, depends on CAPES assessment criteria. Even not clear, other elements based on online education complement these assessment criteria. Considering future updates as a contingency (Shenrar & Dvir, 2007), we suggest an adaptive project management practices approach in cases that HEIs are intended to apply for a new online postgraduate program, based on the simplified list of project management practices showed in Table 1, as already proposed by Azevedo, Maccari, and Asgary (2021) in its case study. In this sense, the coordinator of educational

project can generate make a list choice that better fit to the processes for preparation of a new online Master's and PhD program proposal. The objective is to loosen the flow of the model, so that it is adjusted as the market acquires maturity in the offer and evaluation of online programs (Maccari *et al.*, 2014).

3. APPROACH

This work was developed based on a qualitative approach and made use of collective techniques, data registration and analysis and interpretation of data on a positivist basis and a methodological structure as indicated by Creswell & Creswell (2017). We chose the descriptive case study as method approach considering, first the unique event characterized for the preparation of new online Master's and PhD proposals pre APCN approval process, second based on its contemporary status of phenomenon with few possibilities of environmental control, following the logic proposed by Yin (2014). Therefore, it is up to researchers see the phenomenon inductively by applying a well-structured process of in-depth analysis, which allows the logic of replicability leading success (results and benefits) to HEIs into CAPES Foundation APCN approval process.

In order to understanding the phenomenon, we define the "preparation of new online program's proposal" CAPES Foundation pre phase event as the unit of analysis. In this sense, we carried out a single case study under this event based on seven experts' experiences in pass proposal's preparation of Master's and PhD onsite programs, as resumed in Table 2.

Table 2
Research process sequence

Step	Method	Output
1st	Data collection	Seven experts interviews.
2nd	Data analysis	Content analysis by data tabulation.
3rd	Results	Results, Discussion and Interpretation.

Source: Authors.

All documents, the protocol used in this research and the semi structured questions are available at follow shared link.

https://drive.google.com/drive/folders/1oOmcPbZdQ-mbrFKj9QkHWsg9bb-g7_w6?usp=sharing

3.1. Data collection

Main data was collected based on interviewees, defined considering their experiences in the APCN approval process and in coordinating and lecturing in postgraduate programs in public and private HEIs. Thus, the selected interviewees met at least one of the following requirements: a) being a graduate management researcher and professor; b) being a researcher and professor in online education; c) being a graduate coordinator or professor who has experienced a submitting proposal for new onsite programs. In total, seven experts were interviewed, and all had experienced an APCN process approval with success in a public or a private HEI, at least twice, either as professor or as coordinator. Table 3 resumes the characteristics of interviews.

Table 3
 Interviewees experiences

Experts	Professor's time (y)	Coordinator's time (y)	APNC Proposal	Research on Postgraduate (EXP)	Research on Online (EXP)
1	21	15	Y	Y	Y
2	8	4	Y	N	N
3	28	7	Y	Y	N
4	15	8	Y	N	N
5	10	4	Y	Y	N
6	11	9	Y	N	N
7	11	9	Y	Y	N

Source: Authors.

All interviews took place without time limitation, allowing the researcher to deepen some questions with some experts, according to the need and permissiveness established in the research protocol. All took place without major interruptions or interference and the audio transmission via the internet did not compromise the understanding of the questions and answers.

3.2. Data analysis

Interviews data collected were transcribed for tabulation analysis in order to codify answers, as content analysis. These spreadsheets in which respondents' answers were organized were tabulated separately, allowing a good discussion throughout four codifications: Postgraduate Management; CAPES evaluation system concerning online offer; Online Postgraduate Education; and Adaptive project management practices.

The purpose of this analysis is to confront, reinforce, complement the respondents' answers from their points of view. A filter was applied on the practices proposed by Eder *et al.* (2015) to gather project management practices, rising from interviews appropriated actions, techniques, and tools that could be applied for the preparation of the new online program's proposal phase in APCN preapproval process. As it is an adaptive approach, it is not addressed the origin of each element (whether agile, classic or both), since, following the observations of Shenhar and Dvir (2007) and Szreder *et al.* (2019), the value of adaptive practices is in the combination between them, according to the characteristics of each project.

4. RESULTS

This topic presents the analysis of the data obtained. At the end of each item, an analysis of the problems identified by the experts was made. Such problems were considered into proposed process that was merged with project management practices, as an adaptive view.

4.1. Postgraduate Management

Experts were asked what the motivation for creating new programs are. The experts cited society's demand, CAPES objectives, IES strategic planning, internal research, demand for science, demand from the rectory, and team demand. The answers obtained are related to our conceptual model, since the needs of society, which are represented by the internal public of the HEI, are highlighted in the model by Maccari, Almeida, Riccio, & Alejandro (2014) and CAPES regulation. The first assumption was stated: **A1**. Society demands and needs of the internal public must be aligned with the objectives and rules of CAPES and structured in IES processes.

When asked about stakeholders, ESP03, ESP05, and ESP07 cite only the faculty involved. Experts ESP02 and ESP06 talk about the interest of graduates and companies that are interested in these professionals. ESP01 also highlights the role of recommendation from the local government, professional councils and other areas related to the program. On stakeholder analysis, there is evidence that experts do not have a consensus. Based on the second assumption: **A2**. List the stakeholders and consult with them during the program development project is necessary to justify the need for the program.

The specialists said that the profile of the graduate is drawn, that is, how it is expected that graduate students will be part of the labor market at the end of the program. Then comes the third assumption of this work: **A3**. The profile of the graduate leads the process of defining the program vision, which, being well defined, the objectives of the program will adjust depending on the possible combination of the research lines of faculty.

4.2. CAPES evaluation system concerning online offer

Regarding the guidelines proposed by CAPES, most said they did not master these rules. Still, he adds that the difficulty would be in the preparation of professors. ESP05 and ESP07 find the guidelines still insufficient. Based on what has been analyzed on this topic, the CAPES guidelines, whether in their evaluation form, the APCN form or in the legislation, the HEI managers seek ways to circumvent this lack of parameters. The interviewees pointed out that it is essential that the HEI provides a good technological structure. ESP03 highlights that the teaching platform must be available to the student 24 hours a day. The fourth assumption is: **A4**. Evaluating and guaranteeing uninterrupted technological infrastructure is an assumption in creating a program.

4.3. Online Postgraduate Education

The experts' answers satisfied the researcher's objectives in identifying the difficulties faced by the experts and what solutions they found. The answers obtained were related to differences between the face-to-face and online programs, and not the differences in the creation process. This demonstrates that professionals are concerned with the scope of the product, which contains the requirements of the programs they will deliver (PMI®, 2017; Kerzner, 2017).

ESP01 speaks of the need to design a good material and the training of professors, once the professors are training themselves and, therefore, leaving up to 4 professionals in charge of the project reduces the chance of making mistakes. ESP02 agrees with ESP01, while ESP04 mentions only the need to seek information about other institutions in Brazil or abroad.

For ESP03 and ESP05 point about the need of HEI infrastructure for interactivity. ESP05 points out the need to have a methodology, well-established teaching-learning processes. Regarding operationalization, ESP02 emphasized administrative issues, such as

secretary and student service, while ESP06 highlights the importance of tutoring. Assumptions 5 and 6 were, then, stated: **A5**. Check the technological infrastructure of the HEI. **A6**. Check and plan document management.

The experts answered about performance of other professionals. Only ESP04 did not identify the need for other professionals in the process. ESP06 stressed the importance of a tutor. An IT professional was mentioned by all the other experts. Experts ESP01, ESP02, ESP03 and ESP07 talked about the need for an instructional designer on the team. ESP03 also mentioned the need for professionals in the areas of communication, library, and teaching platforms. The analysis generated the 7th and 8th assumptions. **A7**. IT professionals must participate in the creation of the program. **A8**. Specialists in the teaching platform, communication professionals, tutors and librarians can be part of the creation of the program.

4.4. Adaptive project management practices

When asked about the use of management practices in the creation of new programs, ESP01 said it uses only the resource-based view (RVB). ESP02 claims not to follow any practice, as it relies only on past experiences and the database of research done with its students. For ESP03, management practice is to follow the APCN submission instructions. ESP04 understands that to use the postgraduate management model is to have it as a managerial practice. ESP05 and ESP07 say they do not know which practices they use and whether they use practices. For ESP06, the managerial practice they use is the collection of data in the research of interest with the students of the HEI.

Faced with unclear answers, we asked specific questions for each practice, so that this could be perceived in the discourse of the specialists used in the creation process in which they participated. Objective questions were asked when the researcher asked specifically about each project management practice from the list of practices by Eder *et al.* (2015). The experts answered whether it was used or not, justifying their decisions.

Indirect statements were also considered, and ESP02 said they did not carry out risk analysis. Despite that, their group analyzes the market, identifies the strengths and weaknesses of the HEI and the team, and this analysis is done in several instances. In this case, this work considered that as risk analysis. It is noted that meetings are a technique used by all the interviewees.

Unanimously, Meetings are also used for this purpose, which reinforces the evidence that the need to control tasks during the project exists, but each one finds a way to deal with it. Answers show that the specialists try, each in their own way, to carry out the activities. With this, the nineth assumption is formulated: **A9**. Adaptive project practices should be used when creating the online Master´s and PhD programs.

The resume of all assumptions raised and their respective impact on the proposed process are shown in Table 4.

Table 4.
Association between assumptions, process flow, and adaptive PM practices

Assumptions	Proposed process flow	Adaptive PM Practices
based on the analysis	(CAPES 2021b; CAPES, 2019e; Maccari, Almeida, Riccio, & Alejandro, 2014; Shenhar & Dvir, 2007)	(PMI®, 2021; Kerzner, 2017; Eder *et al.*, 2015)
A1	1. Market Research	Activities: collect requirements, problem/opportunity statement
A2	1. Market Research	Technique: group dynamics
	6. Group Dynamics on DE	Technique: meeting
	7. Meeting with instructional designers and IT professionals	
A3	2. Resources Analysis meeting and definition of the graduates' profile and program objective	Technique: meeting
	8. Program outline with post-it	Tool: self-adhesive cards
A4	7. Meeting with instructional designers and IT professionals	Technique: meeting
A5	2. Resources Analysis meeting and definition of the graduates' profile and program objective	Activity: identify the work required for the project
		Technique: meeting

A6	5. Presentation of instructions to team members	Technique: meeting
A7	7. Meeting with instructional designers and IT professionals	Technique: meeting
A8	7. Meeting with instructional designers and IT professionals	Technique: meeting
A9	3. Risk analysis	Activity: risk analysis
	4. Presentation of the project to all the professors	Technique: meeting
	9. Presentation of the project	
	10. Presentation to the rectory	

Source: Authors.

The practices 4, 9 and 10 of the proposed process were not generated by any specific assumption but emerged during the interview with the experts in as practices needed after some phases of the project of creation. These are presentation meetings, either for the team at the beginning of the project or for approval with the rectory.

Addressing the process of creating new programs, the question sought to know whether the specialists use any management model, formal or informal. In the 7 responses, 5 different models were raised, formal and informal.

The team's experience is widely used. ESP02, ESP03, ESP04 and ESP07 use formal and informal forms. Maccari's Model (2008) was used formally by three specialists: ESP01, ESP04 and ESP05, using it combined with the APCN file, with the team's experience and with the CAPES' Area Document.

5. ADAPTIVE PROJECT MANAGEMENT PRACTICES

The process proposed in this paper was elaborated based on the assumptions presented. The assumptions from the category 'Postgraduate Management' are related to the purpose of the Master´s and PhD online programs. The interest of the society (A1) is reflected in 1. Market research. In the process, this step is before the beginning of the project itself. Regarding the stakeholders, A2 states that they need to be consulted during the project,

reflecting in 1. Market research 6. Group dynamics on distance education and 7. Meeting with instructional designers and IT professionals (step 1 related to the external stakeholders and the 6th and 7th to the internal ones.

From the category 'CAPES evaluation system concerning online education' emerged the assumption A4 (evaluating and guaranteeing uninterrupted technological infrastructure is an assumption in creating an online Master´s and PhD program), despite of being a technical issue, when working in a multidisciplinary team, the requirements must be addressed to a department. In the process proposed in this paper, A4 appears in the step 7, meeting with instructional designers and IT professionals. At that point, all the technical requirements expressed by the interviewees should be addressed to the IT professional assigned.

The category that generated the most assumptions (4 in total), is 'Online Postgraduate Education'. Two of them (A5. Check the technological infrastructure of the HEI and A6. Check the plan document management). Differently from the A4, this technological infrastructure appears at the beginning of the process, because it is related to the minimal requirements that a Master´s or PhD online program must have to submit the proposal. For that reason, they are reflected in the process in the steps 2 (resources analysis meeting and definition of the graduates' profile and program objective) and 5 (presentation of instructions to team members), respectively. Assumptions A7 and A8 are related, respectively, to IT members of the team and to multidisciplinary areas such as communication, tutors, and librarians. They are in the model in step 7 (meeting with instructional designers and IT professionals. However, they are not in the title of the step because the professionals involved in A9 act as a support for the instructional designers and IT members. Our main result was embodied in the proposed process (Figure 3).
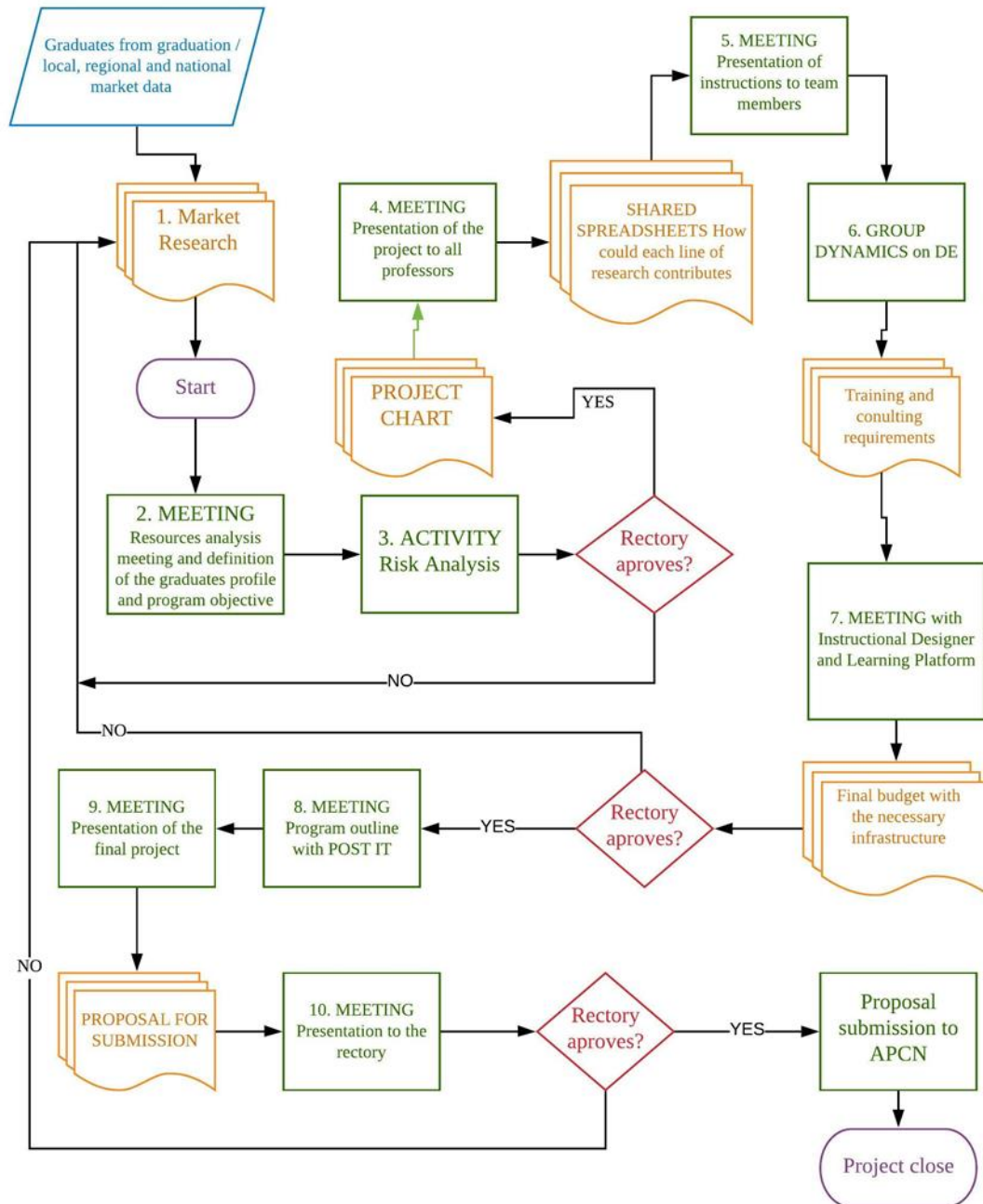
Figure 3. Adaptive project management practices process flow
Source: Authors.

Regarding the Adaptive project management practices, A9 (Adaptive project practices should be used when creating the program) emerged. Despite being the purpose of the process proposed in this paper, we see that it reflects on a project management practice that is used informally by the experts, what lead us to include in the process, that is the risk management. The other practices that A9 may include were already inserted in the model due to the other

assumptions. Finally, the subjective matter of this assumption justifies the existence of this work.

As shown in Figure 3, the process we propose with this work give the steps that should be followed during the elaboration of the proposal of a new Master´s and PhD online program. In addition, it gives the user the possibility of carry out the project with the specificities that belong to their projects. That is because we follow the understanding and the guidelines brought by Shenhar & Dvir (2007) that the use of the adaptive project management practices allows the professionals to decide the best practice depending on the features of each project. In that way, our process is a flow of steps in which each step can be used by HEIs coordinators in a wide range of possibilities.

6. CONCLUSIONS

The behavior of developing Master's and PhD online programs with a structure practically identical to others is not possible to be replicated with online postgraduate programs, since there are no online programs offered in Brazil. It remains for the professionals who propose or wish to develop them, to depend only on the guidelines, including the legal and regulatory provisions, and on the CAPES evaluation form, whose criteria are in transition.

Based on complete data analysis and interpretations, we observed a real necessity of managerial adaptive practices adoption during the preapproval preparation of new online Master's and PhD programs, as already exposed by Pardim and Maccari (2014). Once these preapproval phase needs to lead to success and this phase could be considered as a project, we suggest the follow proposition:

P1 Adopt adaptive project management practices in the new Master's and PhD online program proposals phase can improve chances to achieve the approval by CAPES assessment process to entry in Brazilian national graduate system (SNPG).

To contribute to HEIs professionals in the approval for the submissions of proposals of new online Master´s and PhD programs, this work aimed to propose an adaptive project management process that contributes to the CAPES Foundation entry process on the SNPG, as analogous study proposed by Nery (2019). To this end, the conceptual model was

developed, based on studies in postgraduate management, online education, and project management practices, demonstrating that the execution of the work achieved the research objective.

The evaluation of the process depends on its application in the creation of a Maser´s and PhD online program in Brazilian HEIs. This process would take about 8 months, combined with CAPES' assessment time for approval. Also, if the program were approved, a four-year cycle would be needed to verify that the program has achieved long-term success (benefits), as exposed by Chih and Zwikael (2015) and by Badewi (2015). In the future, after monitoring the performance of new online Master´s and PhD programs authorized, it will be possible to improve the proposed process to outcome good results in the next CAPES' four-year evaluation system (2021–2024).

Yet, we suggest that this proposed process can contribute to HEIs coordinators and administrators who are interested in submitting a new proposal of online Master's and PhD program, becoming pioneers in a market that is in its initial phase in Brazil.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

Abrami, P. C., Bernard, R. M., Bures, E. M., Borokhovski, E., & Tamim, R. M. (2011). Interaction in distance education and online learning: Using evidence and theory to improve practice. *Journal of Computing in Higher Education*, *23*(2–3), 82–103. https://doi.org/10.1007/s12528-011-9043-x.

Alves, L. C. R. (2016). Educação superior a distância: Desafios, perspectivas e possibilidades. *Composição Revista de Ciências Sociais da UFMS*, (18), 74-90.

Andrade, E. F. da S., De Oliveira, J., Maccari, E. A., & Hollnagel, H. (2018). Inovação em um contexto isomórfico nos Programas De Pós-Graduação Stricto Sensu em administração. *Revista Gestão & Tecnologia*, 18(2), 100–127. https://doi.org/10.20397/2177-6652/2018.v18i2.1415.

Austin, C., Browne, W., Haas, B., Kenyatta, E., & Zulueta, S. (2013). Application of Project Management in Higher Education. *Journal of Economic Development, Management, IT, Finance and Marketing*, *5*, 75–99.

Azevedo, G., Maccari, E., & Asgary, N. (2021). The use of adaptive project management practices and methodologies in the development of a professional doctoral program. *Revista de Administração da UFSM*, 14(1), 44-62. doi: https://doi.org/10.5902/1983465942849.

Badewi, A. (2015). The impact of project management (PM) and benefits management (BM) practices on project success: Towards developing a project benefits governance framework. *International Journal of Project Management*, *34*(4), 761–778. https://doi.org/10.1016/j.ijproman.2015.05.005.

Bussler, N. R. C., Hsu, P. L., Storopoli, J. E., & Maccari, E. A. (2019). Cenários para o futuro da educação a distância. *Revista Gestão & Tecnologia*, *19*(2), 4–26. https://doi.org/10.20397/2177-6652/2019.v19i2.1602.

CAPES (2011). *Plano Nacional de Pós-Graduação (PNPG), 2011-2020*, Vol. 1 e Vol. 2. Brasília: CAPES. Retrieved Oct 01, 2021, from https://www.gov.br/capes/pt-br/acesso-a-informacao/institucional/plano-nacional-de-pos-graduacao.

CAPES (2014a). *Assimetrias regionais e soluções para o problema são tratados por coordenadores de área*. Retrieved Oct 6, 2019, from https://www.gov.br/capes/pt-br/assuntos/noticias/assimetrias-regionais-e-solucoes-para-o-problema-sao-tratados-por-coordenadores-de-area.

CAPES (2014b). *Caracterização do Sistema de Avaliação da Pós-Graduação*. Retrieved Oct 20, 2021, from https://www.gov.br/capes/pt-br/acesso-a-informacao/acoes-e-programas/avaliacao/sistema-nacional-de-pos-graduacao-snpg/permanencia/avaliacoes-anteriores-1/avaliacao-trienal-2004-1/caracterizacao-do-sistema-de-avaliacao-da-pos-graduacao.

CAPES (2018). *Grupo de trabalho discute pós-graduação stricto sensu a distância*. Retrieved Oct 20, 2021, from https://www.gov.br/capes/pt-br/assuntos/noticias/grupo-de-trabalho-discute-pos-graduacao-stricto-sensu-a-distancia.

CAPES (2019a). *CAPES recebe primeiras propostas de mestrado EaD*. Retrieved Oct 14, 2019, from https://www.gov.br/capes/pt-br/assuntos/noticias/capes-recebe-primeiras-propostas-de-mestrado-ead.

CAPES (2019b). *Relatório de Grupo de Trabalho*: Proposta de revisão da Ficha utilizada para a Avaliação dos programas de Pós-graduação. Retrieved Oct 21, 2021, from https://www.gov.br/capes/pt-br/centrais-de-conteudo/10062019-fichaavaliacao-pdf.

CAPES (2019c). *Página da área – Administração Pública e de Empresas, Ciências Contábeis e Turismo*. Retrieved Oct 20, 2021, from https://www.gov.br/capes/pt-br/acesso-a-informacao/acoes-e-programas/avaliacao/sobre-a-avaliacao/areas-avaliacao/sobre-as-areas-de-avaliacao/colegio-de-humanidades/ciencias-sociais-aplicadas/administracao-publica-e-de-empresas-ciencias-contabeis-e-turismo.

CAPES (2019d). *Mudanças na ficha de avaliação valorizam qualidade dos programas*. Retrieved May 23, 2021, from https://www.gov.br/capes/pt-br/assuntos/noticias/mudancas-na-ficha-de-avaliacao-valorizam-qualidade-dos-programas.

CAPES (2019e). *Portaria nº 33*, de 12 de fevereiro de 2019. Disciplina o processo de avaliação de propostas de cursos novos, APCN.

CAPES (2019g). *Portaria Nº 90*, de 24 de abril de 2019. Dispõe sobre os programas de pós-graduação stricto sensu na modalidade de educação a distância.

CAPES (2020a). *Sistema Nacional de Pós-graduação (SNPG)*: Entrada. Retrieved Oct 6, 2021, from https://www.gov.br/capes/pt-br/acesso-a-informacao/acoes-e-programas/avaliacao/sistema-nacional-de-pos-graduacao-snpg/entrada.

CAPES (2020b). *Portaria N° 70*, de 05 de junho de 2020. Regulamenta o art. 8° da Portaria nº 90, de 24 de abril de 2019, estabelecendo as diretrizes para autorização de funcionamento e para a avaliação de permanência de Polos de Educação a Distância (polo EaD) para oferta de cursos de pós-graduação stricto sensu.

CAPES (2020c). *Portaria N° 129*, de 04 de setembro de 2020. Institui Grupo de Trabalho (GT) com o objetivo de apresentar propostas destinadas à revisão e ao aprimoramento da Portaria CAPES nº 70, de 5 de junho de 2020, que regulamenta o art. 8° da Portaria nº 90, de 24 de abril de 2019, com vistas ao estabelecimento de diretrizes para a autorização de funcionamento e para a avaliação de permanência de Polos de Educação a Distância (polo EaD) para oferta de cursos de pós-graduação stricto sensu.

CAPES (2021a). *Portaria N° 02*, de 04 de janeiro de 2021. Regulamenta o art. 8° da Portaria CAPES nº 90, de 24 de abril de 2019, estabelecendo as diretrizes para autorização de funcionamento e para a Avaliação de permanência de Polos de Educação a Distância (polo EaD) para oferta de cursos de pós-graduação stricto sensu.

CAPES (2021b). *Sobre a Avaliação: Conceitos, processos e normas*. Retrieved Oct 21, 2021, from https://www.gov.br/capes/pt-br/acesso-a-informacao/acoes-e-programas/avaliacao/sobre-a-avaliacao/avaliacao-o-que-e/sobre-a-avaliacao-conceitos-processos-e-normas.

CAPES (2021c). *Plataforma Sucupira*. Retrieved Oct 02, 2021, from https://sucupira.capes.gov.br/sucupira/#.

CAPES (2021d). *Dados Abertos CAPES*. Retrieved Aug 23, 2021, from https://dadosabertos.capes.gov.br/.

Carvalho, M. M. de, & Rabechini Jr, R. (2018). *Fundamentos em gestão de projetos:* Construindo competências para gerenciar projetos (5th ed.). São Paulo: Atlas.

Chih, Y.-Y., & Zwikael, O. (2015). Project benefit management: A conceptual framework of target benefit formulation. *International Journal of Project Management*, *33*(2), 352–362. https://doi.org/10.1016/j.ijproman.2014.06.002.

Costa, K. A. S. da, Fofonca, E., & Sartori, A. S. (2018). A legislação educacional da modalidade de educação a distância: análise de perspectivas que identificam sua possível legitimação. *Congresso Internacional de Educação e Tecnologias:* São Carlos.

Creswell, J. W. & Creswell, J. D. (2017). *Research Design:* Qualitative, Quantitative, and Mixed Methods Approaches (5th ed.). Thousand Oaks, USA: SAGE Publications, Inc.

Desafios da Educação (2019). *Em 2020, Brasil poderá ter até 17 cursos de mestrado EAD*. Recuperado de: https://desafiosdaeducacao.grupoa.com.br/cursos-de-mestrado-ead/.

Desafios da Educação (2021). *Capes rejeita todas as propostas de mestrado EAD*. Recuperado de: https://desafiosdaeducacao.grupoa.com.br/capes-rejeita-mestrado-ead/.

Eder, S., Conforto, E. C., Amaral, D. C., & Silva, S. L. da. (2015). Diferenciando as abordagens tradicional e ágil de gerenciamento de projetos. *Production*, *25*(3), 482–497. https://doi.org/10.1590/S0103-65132014005000021.

Eder, S., Conforto, E. C., Schnetzler, J. P., Amaral, D. C., & Silva, S. L. da. (2012). Estudo das práticas de gerenciamento de projetos voltadas para desenvolvimento de produtos inovadores. *Produto & Produção*, *13*(1). https://doi.org/10.22456/1983-8026.24600.

Gorod, A., Hallo, L., & Nguyen, T. (2018). A Systemic Approach to Complex Project Management: Integration of Command-and-Control and Network Governance: A systemic approach to complex project management. *Systems Research and Behavioral Science*, *35*(6), 811–837. https://doi.org/10.1002/sres.2520.

Jugdev, K., Perkins, D., Fortune, J., White, D., & Walker, D. (2013). An exploratory study of project success with tools, software and methods. *International Journal of Managing Projects in Business*, *6*(3), 534–551. https://doi.org/10.1108/IJMPB-08-2012-0051.

Kerzner, H. (2017). *Project management*: A systems approach to planning, scheduling, and controlling (12th ed.). Hoboken, New Jersey: Wiley.

Maccari, E. A., Almeida, M. I. R. de, Nishimura, A. T., & Rodrigues, L. C. (2009). A gestão dos programas de pós-graduação em Administração com base no sistema de avaliação da CAPES. *Revista de Gestão*, *16*(4), 1–16. https://doi.org/10.5700/rege376.

Maccari, E. A., Almeida, M. I. R. de, Riccio, E. L., & Alejandro, T. B. (2014). Proposta de um modelo de gestão de programas de pós-graduação na área de Administração a partir dos sistemas de avaliação do Brasil (CAPES) e dos Estados Unidos (AACSB). *Revista de Administração*, *49*(2), 369–383. https://doi.org/10.5700/rausp1152.

McKee, M. C., Mills, A. J., & Weatherbee, T. (2005). Institutional Field of Dreams: Exploring the AACSB and the New Legitimacy of Canadian Business Schools. *Canadian Journal of Administrative Sciences / Revue Canadienne Des Sciences de l'Administration*, *22*(4), 288–301. https://doi.org/10.1111/j.1936-4490.2005.tb00375.x.

Mezzaroba, O., & Maccari, E. A. (2017). A pós-graduação stricto sensu em direito: um olhar a partir das fichas de avaliações das trienais de 2010 e 2013 sobre o quesito da produção intelectual. *Revista de Direito Brasileira*, *17*(7), 328–357. https://doi.org/10.5585/rdb.v17i7.731.

Nery, A. L. B. (2019). *Adaptive project management practices applied to inter-institucional business administration doctoral programs*. Master's thesis, Universidade Nove de Julho, SP, Brasil.

Paik, S. J. (2018). Potential of Higher Education for National Economic Development of Developing Countries. *KDI School of Public Policy and Management*, (18). http://dx.doi.org/10.2139/ssrn.3306858.

Pardim, V. I., & Maccari, E. A. (2014). A educação a distância na pós-graduação stricto sensu brasileira: limites e possibilidades. *In Anais do Workshop de Informática na Escola* (Vol. 20, No. 1, p. 1). https://doi.org/10.5753/cbie.wie.2014.1.

Project Management Institute [PMI®] (2021). *A Guide to the Project Management Body of Knowledge* [PMBoK® Guide] (7th ed.). Newtown Square, PA, USA: Author.

Project Management Institute [PMI®] (2017). *The standard for program management* (4th ed.). Newtown Square, PA, USA: Author.

Scafuto, I. C., Backes, D., & Maccari, E. (2017). Grupos estratégicos isomórficos: Um estudo no ranking da América Economia. *Revista de Ciências da Administração*, *19*(48), 136–149. https://doi.org/10.5007/2175-8077.2017v19n48p136.

Shenhar, A., & Dvir, D. (2007). *Reinventing Project Management. The Diamond Approach to successful growth and innovation*. Boston, Massachusets: Harvard School Press.

Shenhar, A., Milošević, D., Dvir, D., & Thamhain, H. J. (2007). *Linking project management to business strategy*. Newtown Square, PA: Project Management Institute.

Storopoli, J. E. (2016). *O uso do Knowledge discovery in database (KDD) de informações patentárias sobre ensino a distância: Contribuições para instituições de ensino superior*. Universidade Nove de Julho, São Paulo.

Szreder, J., Walentynowicz, P., & Sycz, P. (2019). Adaptative Project Framework as a Development Project Management Method on the Example of the Kashubska Ostoja Project. *Real Estate Management and Valuation*, *27*(1), 5–14. https://doi.org/10.2478/remav-2019-0001.

Teixeira, G. C. dos S., Maccari, E. A., & Martins, C. B. (2016). Influência da regulamentação da coordenação de aperfeiçoamento de pessoal de nível superior (CAPES) na gestão estratégica de projetos educacionais. *Revista Gestão & Tecnologia 16*(2), 22. http://dx.doi.org/10.20397/2177-6652/2016.v16i2.951.

Tourinho, E. Z., & Bastos, A. V. B. (2010). Desafios da Pós-Graduação em Psicologia no Brasil. *Psicologia: Reflexão e Crítica*, *23*. https://doi.org/10.1590/S0102-79722010000400005.

Yin, R. (2014). *Case study research*: design and methods (5th ed.). Thousand Oaks, USA: SAGE Publications, inc.