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Original article

Flows that guide the self-assessment process of a master's program

Flujos que orientan el proceso de autoevaluación de un programa de maestría

Fluxos que orientam o processo de autoavaliação de um programa de mestrado

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ABSTRACT

The process of self-evaluation of the university programs constitutes a priority in the administration of quality of the Superior Education; mainly, if it is analyzed that it should drive to their continuous improvement for the excellence. In consequence, he/she stands out the importance that has the information and their appropriate use in the process of self-evaluation of a master program like demand of the superior education. With the result that, this article has as objective to socialize a proposal of flows that you/they guide the summary process, organization and analysis of the necessary information for the self-evaluation of a master program. For their design he/she was necessary of the use of a methodology that combined theoretical and empiric methods; of the first ones it was used the historical-logical one and the analytic-synthetic one for the foundation and understanding of the self-evaluation process; as long as, of the seconds, the sessions and interviews were used in depth with the purpose of systematizing the experiences of the participant agents and of valuing the proposal of flows, considered as the main result; those that, according to the approach of the actors of the programs of master of the University of Sancti Spíritus José Martí Pérez, they facilitate the summary, organization and interpretation of the information.

Keywords: self-evaluation; flows; information and master.

RESUMEN

El proceso de autoevaluación de los programas universitarios constituye una prioridad en la gestión de calidad de la Educación Superior; sobre todo, si se analiza que debe conducir a su mejora continúa para la excelencia. En consecuencia, se destaca la importancia que tiene la información y su adecuado uso en el proceso de autoevaluación de un programa de maestría como exigencia de la Educación Superior. De ahí que, este artículo tiene como objetivo socializar una propuesta de flujos que orientan el proceso de recopilación, organización y análisis de la información necesaria para la autoevaluación de un programa de maestría. Para su diseño se precisó de la utilización de una metodología que combinara métodos teóricos y empíricos; de los primeros se utilizó el histórico-lógico y el analítico-sintético para la fundamentación y comprensión del proceso

de autoevaluación; en tanto, de los segundos, se emplearon las sesiones y entrevistas en profundidad con la finalidad de sistematizar las experiencias de los agentes participantes y de valorar la propuesta de flujos, considerados como el principal resultado; los que, según el criterio de los actores de los programas de maestría de la Universidad de Sancti Spíritus ¨José Martí Pérez¨, facilitan la recopilación, organización e interpretación de la información.

Palabras clave: autoevaluación; flujos; información y maestría.

RESUMO
O processo de autoavaliação dos cursos universitários constitui uma prioridade na gestão da qualidade do Ensino Superior; sobretudo, se for analisado que deve conduzir à sua melhoria contínua para a excelência. Destaca-se, portanto, a importância da informação e seu uso adequado no processo de autoavaliação do mestrado como requisito do Ensino Superior. Assim, este artigo visa socializar uma proposta de fluxos que orientem o processo de coleta, organização e análise das informações necessárias para a autoavaliação de um programa de mestrado. Para o seu desenho, foi necessária a utilização de uma metodologia que combinasse métodos teóricos e empíricos; da primeira, foram utilizados o histórico-lógico e o analítico-sintético para a fundamentação e compreensão do processo de autoavaliação; enquanto, desta última, foram utilizadas sessões de profundidade e entrevistas para sistematizar as experiências dos agentes participantes e avaliar a proposta de fluxo, considerada como principal resultado; aqueles que, de acordo com os critérios dos atores dos programas de mestrado da Universidade de Sancti Spíritus ¨José Martí Pérez¨, facilitem a coleta, organização e interpretação da informação.

Palavras-chave: autoavaliação; fluxos; informações e conhecimentos.

INTRODUCTION

The advances of society drive the economic, political and social improvement of the peoples of the world and, in turn, demand new ways of managing quality. With this purpose, today more than ever universities are heading their way towards the search for quality and excellence (Véliz, 2018). Hence, its challenge in the face of the demands of an increasingly complex world is to meet the evaluation criteria that allow the quality of its programs to be demonstrated (Valdés et al., 2021) and, for this, there are national and international organizations that since the conduct of accreditation processes raises the need to achieve new and diverse competencies (Bonifaz and Barba, 2019) or to improve them.

Within this framework, the entire university community must think and act systematically based on the quality of Higher Education; On this subject, the literature indicates that the various approaches developed agree that their objective is to gather systematic information and reach judgments about the object being evaluated (González and Cocolotl, 2020). In this regard, in Cuba alternatives are sought that revolutionize - university education and its programs and, for this, the evaluation and accreditation processes have the responsibility of raising the quality of universities (Gil, Morales and Basantes, 2014).

From this perspective, it is necessary to comply with the objectives and goals of the 2030 Educational Agenda, which is why quality, its management, evaluation and accreditation in universities is an imperative need (Noda, 2017). Therefore, the Ministry of Higher Education (MES) must offer a

response to social demands and, for this, requires the development of a culture of quality that facilitates the efficient management of its processes.

Consequently, universities must design "information flows aimed at retrieving information for quality management from the implementation of the Higher Education Evaluation and Accreditation System (SEAES)" (Pérez, Rodríguez and Antúnez, 2022, p. 153).

In this sense, managing quality is a priority for Higher Education and, in particular, for its programs and institutions; that must combine, in a coherent way, academic excellence and comprehensive relevance. (Noda, 2017)

To this end, systems and procedures are established that facilitate quality management from a transformation and systematic improvement perspective (Razo, Iñigo and Dibut, 2017), which promotes continuous improvement by providing valuable information that enables adequate decision-making. decisions (Noda, 2017).

This requires compliance with SEAES quality standards. Hence, in Regulation 150/2018 of the MES, the general objective is specified "to contribute in a systemic and comprehensive manner to the continuous improvement of substantive processes in Higher Education Institutions" (MES, System of Evaluation and Accreditation of Higher Education, 2018, p.1), and as a specific objective "provide information to society about the quality of programs and institutions and promote a culture of quality management and continuous improvement" (MES, System of Evaluation and Accreditation of Higher Education, 2018, p.1); In addition, it establishes self-assessment as a mandatory process.

Regarding the last idea, he agrees with Noda (2017) when he highlights the role of

document and information management to make decisions in quality management. Consequently, self-evaluation is analyzed as a central element that allows programs to carry out a global and systematic examination to regulate their activities and results in comparison with a model (Horruitinier, 2007), contributing to the improvement of the participation of the entire university community (González and Cocolotl, 2020) and requires detailed information to analyze the process and its results; in order to promote feedback and decision-making based on facts (Pérez, Rodríguez and Antúnez, 2022).

That is why, for the analysis of self-assessment as a process, three important moments are considered: the collection and evaluation of reliable information, the issuance of value judgments about the object evaluated and the decision-making that aim at improvement (Herrera and Sánchez, 2013) and, in them, all the actors that participate in the management of the program or the institution should be involved in the permanent reflection on being, doing and should be; that is, students, teachers, administrative staff, managers, graduates and employers (Fernández, 2019).

Villarroel and Hernández (2019) point out that self-assessment constitutes in itself a process of continuous improvement that generates information to make decisions and promote improvement actions based on the transparent, reflective and ethical participation of all university actors in an institution or A program.

In correspondence with the above, the self-assessment from the SEAES is considered a mandatory process; organized and conducted by the actors of the program or the self-assessing institution. In addition, it is an inclusive process that focuses on the ideal of the university or program (MES, 2018), constitutes an exercise of permanent review, recognition and intervention based

on continuous improvement and should stimulate changes in the short, medium and long term. (Fernandez, 2019). Hence, an important role is assigned to the collection, organization and analysis of the information resulting from the management of a university program or institution.

Faced with this reality, it is necessary to ask oneself: how to guide the process of gathering, organizing and analyzing information during the self-evaluation of a Master's program? In order to offer an answer from science, a proposal is put to consideration that may be important so that the actors who manage the master's programs and the managers and actors responsible for their evaluation have tools that facilitate the realization of the corresponding processes. and make the most appropriate decisions based on their improvement. Its scope is materialized in what it means for the self-assessment process of master's programs; as well as the possibility of being transferred to other programs and of being used to design digital tools that facilitate the self-assessment process.

Hence, the objective of this article is: to socialize a proposal of flows that guide the process of collection, organization and analysis of information during the self-assessment of a master's program.

MATERIALS AND METHODS

To answer the question, a mixed approach methodology was used that facilitated the use of theoretical and empirical methods based on the determination of the theoretical and methodological foundations on which the design of the flows was based; as well as the systematization of the experiences of the participants in the self-evaluation processes of master's programs.

Of the theoretical methods, the historical-logical, the analytical-synthetic and the inductive-deductive were used; those that allowed to determine the theoretical and methodological positions around the self-assessment process and the role of the collection, organization and analysis of information.

In addition, the analysis of documents, the in-depth interview and the systematization of experiences were used as empirical methods; those that made possible the study of the self-evaluation process of the master's programs of the University of Sancti Spíritus and the determination of regularities.

The foregoing led to the analysis of the actors participating in the self-evaluation process of the master's degree programs of the University of Sancti Spíritus ¨José Martí Pérez¨ as a research study unit. In this sense, the entire population of the members of the academic committees of the master's degrees was determined. Of these, the 17 who had undergone self-assessment and external assessment processes were selected as a sample. Statistical-mathematical methods were used to process the information during the diagnosis and assessment of the flows by the specialists; in particular, measures of central tendency.

RESULTS

An in-depth interview was carried out with the 17 subjects participating in the research in order to find out their opinions and experiences in relation to the self-assessment process and, in particular, the collection, organization and analysis of information and its use for the improvement of master's programs.

- When asked about their conception of self-assessment, they agreed to highlight its importance; as well as

the fact of considering the standard of quality as the duty to be; however, it was striking that only two of the interviewees referred to its procedural nature.

- When asked about what to do in the self-assessment process, all the subjects insisted on preparing the report and the action plan for program improvement; only three of them referred to the importance of collecting the information in order to prepare an adequate report and make the appropriate decisions.

- When investigating the moments of the self-assessment process, there was a coincidence when referring to the collection of information, the preparation of the report and the improvement plan; In addition, it could be inferred that they carry out the actions for the closing of editions and not as part of a systematic process. In no case was the need to make timely decisions based on the analysis of the information obtained highlighted.

- Once it was found out who participated in the self-evaluation process, all the subjects insisted that it is a responsibility of the academic committee and that, generally, work commissions were created by variables. They also pointed out that faculty members and students only provided information.

- On the other hand, the interviewees stated that sometimes the collection of information is spontaneous and formal; because afterwards, an analysis is not always carried out that implies decision-making and information is not crossed either.

- In addition, they reported that in the experiences they have lived, the information is almost always incomplete and that sometimes contradictions appear; In addition, they stated that, although they use the SEA-M annexes, the organization

of the information is complex and, above all, to make understand the need to see this as a systematic process.

The analysis of the previous results made it possible to identify the following as shortcomings in the self-assessment process:

- They do not always understand the importance of having accurate and relevant information for decision-making in favor of the continuous improvement of the program.

- There is a limited culture of systematic collection, organization and analysis of program information necessary for self-assessment and continuous improvement.

- During the collection, organization and analysis of information, generally not all the actors of the program participate and they exchange information among themselves.

- Frequently, the organization of the information does not favor decision-making to improve the program and they do not have tools to guide this process.

- There is little degree of socialization and exchange of information resulting from the program management process.

These results evidenced a contradiction between what the SEAES requires in relation to the self-evaluation process and the practices carried out for the self-evaluation of master's programs. Hence, it was necessary to design flows that guide the actors, who direct and participate in these programs, to carry out the self-assessment process.

Next, the theoretical and methodological elements that support the relevance of the flows for the collection, organization and analysis of information during the self-

evaluation of a Master's program were specified. In this regard, firstly, they agree with Bodes and Ruiz (2020) when they state that information constitutes one of the most valuable assets of an organization and its processes; In this case, the process under analysis is the Master's program.

Meanwhile, managing information implies developing a strategic process that guarantees its greater and better use based on decision-making by managers; and thus, contribute to improvement (Rodríguez, 2015). In this sense, the information will allow the program to carry out a more agile self-assessment process and will allow it to place greater emphasis on analysis and decision-making for continuous improvement (Zambrano, González and Batista, 2020).

Hence, the fact of considering that flows allow a process to be mapped using a series of connected symbols, which makes it easier to understand; They must provide an image of the process and ensure monitoring of what has been done, what to do next and what is pending (Pérez, Rodríguez and Antúnez, 2023).

In this regard, it is highlighted that the flows represent the sequence or the logical steps to carry out a task through symbols and for their construction the following rules must be taken into account: all symbols must be connected; a process symbol can contain several lines; a decision symbol can receive several lines, but only two will come out (Yes or No, True or False); lines never reach a start symbol and no line starts from an end symbol.

The flows that are part of the proposal that is being considered in this article are described below. For its design, it was taken into account that the Master's Degree Evaluation and Accreditation Subsystem (SEAM) recognizes the following as main actors that participate in the self-evaluation

process: managers, academic committee, faculty, students, graduates and employers. Meanwhile, the variables to be evaluated are: relevance and social impact, faculty, students, infrastructure and curriculum.

On the other hand, it was necessary to understand that the self-assessment process of a program requires clear, precise and reliable information for decision-making based on improvement. Faced with this reality, the actors who participate in the management of the program must be active in the collection, organization and analysis of the information derived from each of the variables established by the SEAES and, in turn, from the network of relationships that manifest between themselves and the actors.

The first flow (Figure 1) illustrates the way in which the self-assessment process of a Master's program has been interpreted, starting from considering the phases of information collection, organization and analysis; as well as decision making. For each of them, its fundamental actions and participants are suggested.
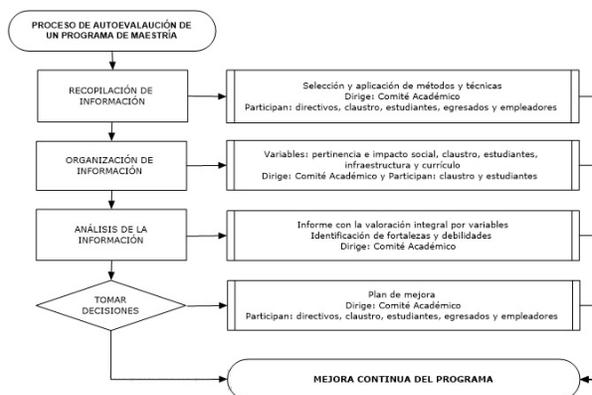

Fig. 1- *Flow that describes the self-assessment process (Own preparation)*

Flow 2 (Figure 2) illustrates the relationships between the participating actors and the variables to which they provide valuable information for the self-assessment process

according to the role of each one of them in the program and in the fundamental actions of the process of self-assessment. self-appraisal. In this flow, the "V" followed by a number has been used to identify the variable according to its order in the SEAM.
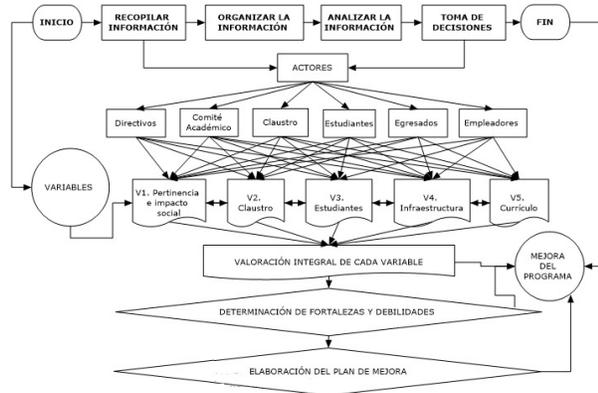

Fig. 2- Relationship flow between actors participating in the self-assessment process and SEAM variables (Own elaboration)

Flows 3, 4, 5, 6 and 7 (Figures 3, 4, 5, 6 and 7) illustrate, in each variable, the stages of the self-assessment process and its fundamental actions; For this, the indicators and evaluation criteria required by the SEAM (2019) are used as a reference. In the case of the reference indicators or those that determine the evaluation category, the corresponding alerts are indicated for decision-making based on the continuous improvement of the Master's program.

In the flows of each variable, the sources of information are specified, the essential information to be collected according to the indicators and evaluation criteria and the outputs from their organization and analysis (documents, quantitative indicators, decisions, strengths and weaknesses and plan of improvement) as part of the self-assessment process.

In the case of the aforementioned flows, the relationships between the indicators, the evaluation criteria, the sources of

information and the main information to be considered during the systematic process of compilation, organization and analysis of the self-assessment are shown. The following flow (Figure 3) corresponds to the variable "Pertinence and Social Impact" and focuses the analysis primarily on the identification of the main impacts of the program. In this flow, "F" and "D" have been used to refer to strengths and weaknesses.
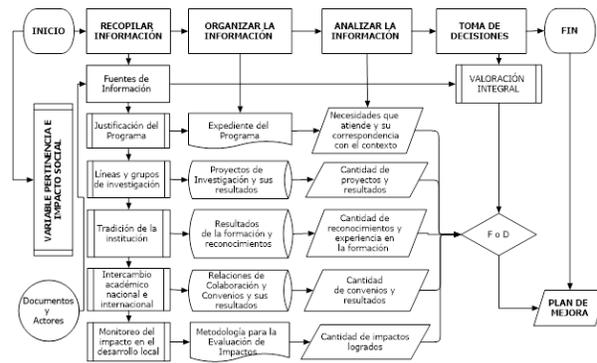

Fig. 3- Information flow for the self-assessment process of the Relevance and Social Impact variable (Own elaboration)

The flow that follows (Figure 4) corresponds to the variable "Claustro" and prioritizes the identification of the recognition of professors and their scientific production. In this flow, "F" and "D" have been used to refer to strengths and weaknesses; "PT" and "PA" to indicate the categories of titular or auxiliary of the professors of the cloister; while, "Prof." refers to teachers, "Cant." to quantity, "Intern." to internationals and "G" to groups.
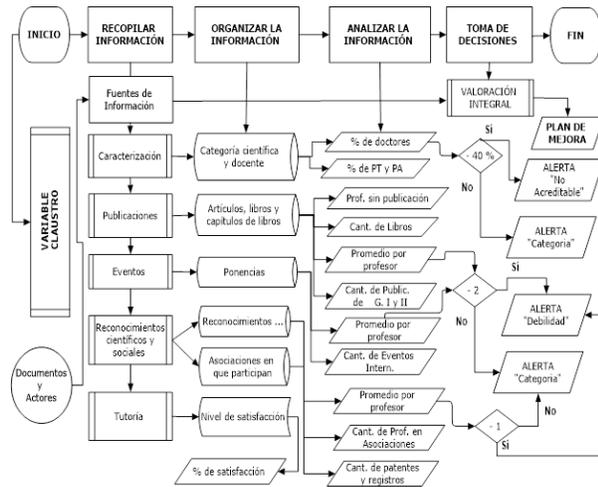
Fig. 4- Information flow for the self-assessment process of the faculty variable (Own elaboration)

The flow that appears below (Figure 5) corresponding to the variable "Students" and analyzes their permanence, the written memories and the scientific production derived from them. In this flow, "F" and "D" have been used to refer to strengths and weaknesses; "PDP" and "PVC" to refer to the term of the program and the term of validity of the credits and "Cant." to quantity.
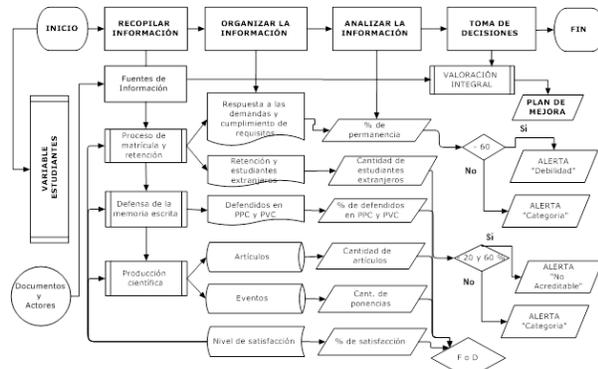

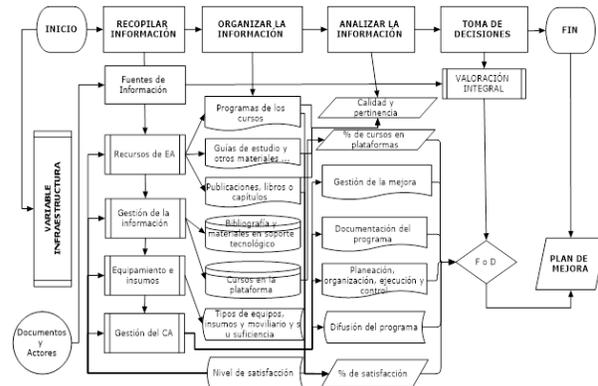**Fig. 5-** Information flow for the self-assessment process of the student variable *(Own elaboration)*

Fig. 6- Information flow for the self-assessment process of the *infrastructure variable (Own elaboration)*
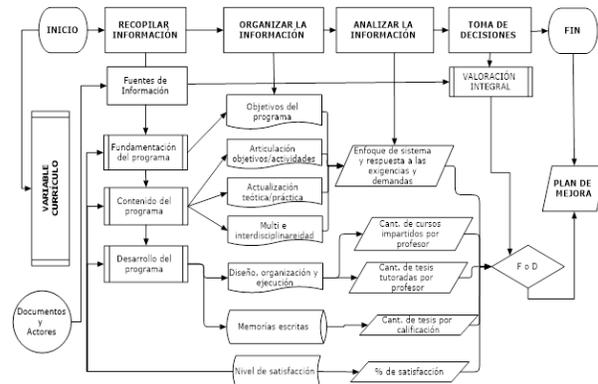

Fig. 7- Information flow for the self-assessment process of the curriculum variable *(Own elaboration)*

Next, the result of the analysis of the flows is specified, in an in-depth session, with the subjects participating in the investigation. Derived from this it could know the following opinions :

- "They facilitate the understanding of the self-assessment process and relate the moments of the process with the participants; this would allow it to be done more scientifically"
- "They specify the actions to be carried out and reveal the importance of the information based on the need to be able to make decisions"

- "They highlight the relationships between the participants and their role in each variable, which demonstrates the need for everyone to be protagonists of the self-assessment process"
- "They describe the information to be collected and what to do with it according to the result; confirming that it is not enough to have the information, it must be organized and analyzed"
- "They serve as a guide to be able to organize the self-assessment process; although the process of gathering information and analysis is still complex"
- "Decision making is emphasized and this is always related to the improvement plan; however, they should better reflect the systematic nature"

DISCUSSION

Derived from the investigative process, it can be reaffirmed that self-assessment is analyzed as a process (MES, 2018) that requires the search, organization and analysis of the information derived from the management of a program (Noda, 2017) and its consideration for decision making. decisions based on continuous improvement (Pérez et al., 2022). In this sense, it is necessary to highlight the need to have tools that facilitate their understanding and implementation; hence the value of the designed flows.

Self-assessment is characterized by being a process that involves the active and conscious participation of all the actors in a program, permanent reflection based on the comparison between being and should be of the program according to quality standards (Ramírez, 2018). In addition, it must be distinguished by being self-critical,

purposeful, scientific and transparent (Villarroel and Hernández, 2019). Consequently, a significant role is assigned to the collection, organization and analysis of the information resulting from the management of the program and, in turn, to decision-making that favors the improvement of the program.

On the other hand, the proposal highlights the importance and relevance of quality management of undergraduate and graduate programs for universities (González and Cocolotl, 2020) and, in particular, emphasizes the role of self-assessment as a process that allows its continuous improvement; as well as the role of the collection, organization and analysis of information (Pérez, Rodríguez and Antúnez, 2022), seeing these as phases through which this process goes through.

From the theoretical point of view, emphasis is placed on the logical relationships between the theoretical foundations that facilitate the understanding and organization of the self-assessment process and the SEAM requirements for its implementation in practice.

The practical value of the phases that the self-assessment process must go through and of the flows that are proposed in order to guide the actions of the actors responsible for the self-assessment process when collecting, organizing and analyzing information systematically based on the decision making for the continuous improvement of the program; which complements the need to attend to documentary sources and their information flows as a challenge for the evaluation and accreditation of postgraduate programs (Pérez, Rodríguez and Antúnez, 2023).

The theoretical analysis, the practical value and the opinions of the research participants signify the scope of the proposal; firstly, due to the importance of the issue related to self-

assessment as an essential process for quality management of master's degree programs; second, due to the need to have tools that allow the understanding of the self-assessment process and, in turn, that guide the actions of the actors and; third, due to the possibility of transfer to the different types of programs that are evaluated according to the SEAES.

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The author participated in the design and writing of the work, and analysis of the documents.