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Enhancing Pedagogic Practice: A Review of Educational Processes

Mejorando la Práctica Pedagógica: Una Revisión de los Procesos Educativos

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ABSTRACT

This paper focuses on the improvement process in the educational setting, highlighting the importance of the participation of various agents, including students, parents, teachers, principals and other educational professionals. The improvement process is based on the continuous review and evaluation of educational practice, with the aim of identifying areas for improvement and addressing them effectively. The paper describes the different stages of the improvement process, starting with the identification of areas for improvement through data collection and analysis. These data are used to produce evidence-based reports that serve as the basis for planning necessary improvements. During improvement planning, areas for improvement are prioritized and action plans are designed to address them. The implementation of improvements involves the implementation of the action plans, with a focus on gathering evidence to assess the impact of the improvements. The improvement process is seen as a continuous cycle, with constant review and feedback to further adjust and improve educational practices. The paper also highlights the importance of the involvement of review and improvement groups throughout the process, as they help to identify problems, needs and areas for improvement, as well as to make evidence-based decisions. Several techniques and tools are mentioned, such as brainstorming, review guide, time profiles and cause-effect diagrams, which are used in the process of data collection and analysis. In conclusion, the importance of an evidence-based approach in the educational improvement process, with the active participation of multiple stakeholders and constant feedback to achieve higher quality education is emphasized. The improvement process is described as a continuous cycle of identifying areas for improvement, planning, implementing and reviewing, with the aim of optimizing educational practice and meeting the needs of students and the educational community at large.

Keywords: Educational Processes; Educational Practice; Action Research.

RESUMEN

El artículo se centra en el proceso de mejora en el ámbito educativo, destacando la importancia de la participación de diversos agentes, incluyendo estudiantes, padres, docentes, directivos y otros profesionales de la educación. El proceso de mejora se basa en la revisión y evaluación continua de la práctica educativa, con el objetivo de identificar áreas de mejora y abordarlas de manera efectiva. El artículo describe las diferentes etapas del proceso de mejora, comenzando por la identificación de áreas de mejora a través de la recopilación y análisis de datos. Estos datos se utilizan para elaborar informes basados en evidencia que sirven de base para planificar las mejoras necesarias. Durante la planificación de mejoras, se priorizan las áreas de mejora y se diseñan planes de acción para abordarlas. La aplicación de las mejoras implica la implementación de los planes de acción, con un enfoque en la recopilación de evidencia que permita evaluar el impacto de las mejoras. El proceso de mejora se considera un ciclo continuo, con la revisión y la retroalimentación constante para ajustar y mejorar aún más las prácticas educativas. El artículo también destaca la importancia de la participación de grupos de revisión y mejora en todo el proceso, ya que ayudan

a identificar problemas, necesidades y áreas de mejora, así como a tomar decisiones basadas en evidencia. Se mencionan varias técnicas y herramientas, como la lluvia de ideas, la guía de revisión, los perfiles temporales y los diagramas causa-efecto, que se utilizan en el proceso de recopilación y análisis de datos. En conclusión, se subraya la importancia de un enfoque basado en evidencia en el proceso de mejora educativa, con la participación activa de múltiples partes interesadas y la retroalimentación constante para lograr una educación de mayor calidad. El proceso de mejora se describe como un ciclo continuo de identificación de áreas de mejora, planificación, aplicación y revisión, con el objetivo de optimizar la práctica educativa y satisfacer las necesidades de los estudiantes y la comunidad educativa en general.

Palabras clave: Procesos Educativos; Práctica Educativa; Investigación Acción.

INTRODUCTION

In the educational context, the improvement process typically relies on the collaboration of teaching teams, often welcoming the participation and engagement of all stakeholders. This encompasses students, their parents, educators, school administrators, and other professionals linked to education.[1,2,3]

Performing evaluations and impact assessments on educational processes is beneficial because it allows for the identification of strengths that contribute to their success or obstacles that impede their proper development. In these evaluations, participants collect and analyze data to create an evidence-based report. This report helps prioritize improvement areas in a well-reasoned manner, offering a comprehensive overview or an initial area of interest aligned with their needs and expectations.[4]

Following the completion of this report, a targeted review of the prioritized area is undertaken. The objective is to diagnose, clarify, and gain a thorough understanding of what is occurring in that context and the reasons behind it. An examination of educational practice or an initial diagnostic evaluation is conducted to contemplate the consistencies and inconsistencies within that practice, along with the underlying causes that provoke them.[5]

After writing the report from this review or self-evaluation, the groups plan improvements. The objective is to create an action plan grounded in the collection and analysis of evidence to ensure its feasibility. The planned improvements are outlined in the report to inform the sectors of the educational community that should be engaged. During the implementation of this plan, evidence is collected and analyzed to reconsider the planned change and its implementation.[6,7,8]

The generated report serves as a foundation for reviewing the implemented improvements. From this moment on, additional spiral cycles commence, leading to the planning of further improvements and subsequent reviews.[9]

The improvement process depends on the efforts of review groups, which are highly valuable during the stages of planning and comprehensive or specific reviews. These groups play a crucial role in identifying and prioritizing issues, needs, areas for enhancement, and carrying out the necessary diagnosis.

DEVELOPMENT

The planning and implementation of improvements also demand the participation of groups to ensure a consensus on the plan and appropriate monitoring. Similarly, while reviewing the implemented improvements, group dynamics promote extensive sharing of viewpoints to delve into educational practices based on collected evidence, formulate assessments, and make decisions directed towards educational improvement. To optimize the dynamics of work groups, it is crucial to ensure that specific objectives are stated in each phase. In order to achieve these objectives, data is collected and analyzed, resulting in the creation of reports that communicate the agreements made and the achievements reached during the review study to the educational community.[10,11,12]

In the initial planning stage, the objective is to collectively specify how to commence and progress in the review and improvement process on a broad scale. Information is exchanged, doubts are clarified, and fundamental knowledge about the process is extended.

The organization of review and improvement groups should promote engagement and cohesion among participants. This involves considering existing diversity while striving for to maintain some consistency within each group and diversity between groups. It is crucial to cultivate a friendly, participatory, motivating, and respectful environment, allowing educators to share their opinions and contribute information and experiences spontaneously and constructively. Despite the formulation of proposals by the leadership team, the process will always be open to new contributions and potential areas for improvement.[13,14]

Throughout the entire process, the leadership team collects information and generates visual materials that summarize their contributions. Additionally, properly coordinated committees and teacher groups will be

established to provide evidence, enhancing reflection on real educational practices. Finally, a report will be written, detailing the decisions made regarding the execution of the review and improvement process. This report will outline the informative sessions to be conducted by the leadership team, specify their content, and the creation of any working committees.[15]

In the general review phase, the goal is to prioritize areas for improvement, focusing on particular areas susceptible to enhancement.[16]

The main goal is to perform a comprehensive analysis of institutional needs in a broad context, emphasizing on identified needs or challenges encountered in educational practices.

In the process of collecting and analyzing data, besides using questionnaires and interviews, the review and improvement group may employ group strategies that blend techniques and other psychopedagogical resources to support the research, such as brainstorming.

For the brainstorming session, the coordinator sets the goal of collecting as many problems and needs as possible, allowing a short period for the group or groups to reflect. Participants write concise phrases, striving to ensure that each phrase embraces a single idea. Later, either verbally or by utilizing written lists or cards, they collectively share the contributions of each participant or group. In this stage, comments on the ideas presented are not allowed, and there is no debate. This approach aims to stimulate the unrestricted participation of everyone, allowing each individual to generate new ideas inspired by the contributions of others. The coordinator gathers all the contributions made.[17,18,19]

The process is enriched when participants not only explore various aspects of their own educational reality but also delve into specialized literature and seek advice from experts on the subject. It is recommended that the group agree to dedicate several days to this review.[20]

When reviewing the list of problems and needs, each phrase is subject to scrutiny, with the goal of ensuring that participants share a common opinion and understanding of the phrase. The coordinator should request any necessary clarifications, and modifications are made as deemed necessary.[21]

Next, the problems and needs are grouped. The information reviewed and modified in the previous phase, is categorized to extract areas for improvement. Phrases with similar problems and needs are grouped.[22] Each group of phrases should be identified with a name summarizing the content of those phrases. If there are remaining sentences that cannot be grouped, the category "others" is assigned. In this way, each group represents a potential area for improvement, enabling us to distinguish it from other areas. [23]

Bizarro, Paucar, and Cambi (2021) consider that the group technique can now be used to prioritize improvement areas through consensus. If there were many areas to improve, some could be eliminated following a pre-established selection criteria. Subsequently, each participant assigns an order or score to each improvement area. This assessment can be based on criteria such as the frequency of problems or needs, or factors like feasibility, impact, complexity, and available resources to determine their importance. For instance, the coordinator may request each participant to provide a written score for each improvement area. [24]

Data recording process can be done by using a response sheet specifically designed for that purpose or simply by raising hands. The objective is to tally the frequency of appearance or mention of the explored characteristics. Thus, during a teacher´s meeting, when inquiring about the area that needs improvement, we can organize the hand-raised responses as follows: educational projects, assessment of learning, curriculum development, and leadership styles.[25,26]

The report should concisely describe the process followed, the identified improvement areas, and their priority, along with the corresponding tabulation.[27] The dissemination of the report's content assists institutions in reflecting on the prioritization of aspects. Subsequently, these aspects will undergo a more specific diagnostic review.[28] This way, others can understand the institution's strengths, positive and negative aspects, potential areas for improvement, and the applied order of priority. The aim is to encourage a more focused review, taking into account the need to establish committees and assign roles to facilitate collaborative work.[29]

During this phase, a diagnostic self-assessment is conducted for the identified improvement area and its priority in the overall review. This involves reviewing educational practices and identifying specific needs and problems (how they arise and evolve, underlying causes, and participants' perceptions). Following this, it becomes possible to find solutions, make improvements, and implement changes. By reflecting on the consistencies and inconsistencies in these practices and the underlying causes that trigger them, the group can explore the genuine needs that have been identified.[30,31,32,33]

In the collection and analysis of data, the need for reflection on educational practices requires gathering a wide variety of data and evidence that will guide the reflection during the development of review groups. Prior to commencing an improvement process, those engaged in each group session must be convinced of the importance of conducting a thorough diagnosis to enhance the chosen domain. It is crucial for them to recognize the necessity of this improvement, involving the initial steps of defining and describing the improvement area and subsequently exploring the causes that give rise to the identified problems or needs. For this purpose, some

of the most appropriate techniques include the review guide, temporal profiles, process mapping, flowcharts, and the identified cause-and-effect diagram.[34,35,36,37]

During the description stage of the improvement area, specific problems and needs are described, aiming to understand their nature, circumstances, place and time of occurrence, and extension or intensity. The review guide is an essential strategy for collecting information, and its development process involves transforming improvement areas into specific questions. These questions can take the form of either a thematic guide or a sequence of inquiries.

The thematic guide only includes potential topics for discussion during the group session. It provides the advantages of being quick, fostering a spontaneous and conversational atmosphere, and maintaining a familiar and colloquial tone. However, data analysis entails a certain complexity, and inconsistencies among analysts are common. In contrast, the structured nature of the question itinerary enhances the involvement of collaborators during its implementation, simplifying and standardizing the data analysis process and promoting greater consistency among analysts. However, it leads to increased monotony during the session, reduced spontaneity, a slower pace, and there is a risk that questions may be formulated literally.[38]

Review guides, whether used as thematic guides or question itineraries, come in a wide range of formats, such as lists, scales, checklists, and semantic differential. To create data collection techniques, particularly review guides, regardless of their format or method, one can follow the same guidelines as outlined in the preceding phase of the overall review. It's essential to consider that this phase involves the specific examination of a previously prioritized improvement area: listing problems and needs, reviewing the list, grouping issues, creating a list of potential areas for improvement, identifying and formulating questions, and recording and analyzing data.[39,40,41]

In the list of problems and needs, it is recommended that participants have expanded their knowledge of the chosen improvement area. Through the brainstorming technique, oral lists can be created as the coordinator of the group session takes notes on a white board, a projected transparency, or even using a computer.

In the selected improvement area, each participant writes an individual list on a previously prepared sheet of paper, and register areas, features, and essential aspects.

On the other hand, in the review of the list of problems and needs, after they are organized, participants or the coordinator verbalize them, and there is a collective sharing of the lists. This is done to foster a shared understanding, clarify concepts, and unify meanings.[42]

The grouping of problems and needs offers the opportunity to create a conceptual map. It also serves as a highly suggestive resource for compiling the aforementioned lists and developing categories. To accomplish this, each participant describes the explored scope in relation to other similar areas or aspects. The advantage lies in the use of a classification system created by the participants, wherein similar and different aspects are described and grouped based on categories developed by the participants themselves. This categorization is made easier if the coordinator has given each participant a sheet of paper with a table divided into four or more quadrants. For a few minutes, they create a list of all the problems and needs they deem necessary, attempting to group similar ones in the same quadrant. To share the results, the moderator requests that each participant explain their categories. Further discussion can be conducted regarding common characteristics and differences among categories. It is recommended to document the classification criteria and the rationale behind them. The focus now shifts to describing the essential problems and needs—those deemed most crucial and susceptible to improvement. This entails explaining their characteristics, potential situations of occurrence, timing, and extension and intensity. As an example, let's suppose that the faculty of an institution engages in training sessions, and this has been identified as a prioritized area for improvement. A potential list of areas for improvement may encompass training objectives, content, methodology, resources, and timing. Describing and reflecting on these aspects requires recording and analyzing data of diverse nature. The subsequent tabulation and graphical representation support discussions on the significance and interpretation of results. Conclusions drawn by one group can be incorporated alongside those from previous groups. Using participants' responses, estimation scales enable the visualization of linear profiles.[43,44,45]

The responses collected through the various methods are usually submitted to the session coordinator, either verbally expressed by each participant or provided directly. After tabulating the data, the group can discuss the meanings and interpret the results. It is advisable for each participant to mark the answers, so that they can be verified later. This way, possible group conformity can be better alleviated, since it is more evident when the answers are only verbal or gestural. It's important to consider that the primary goal of estimation scales, checklists, and semantic differential used during review group sessions is to encourage discussion, rather than aiming for statistical precision in measuring the explored aspect. Even during the group session, review guides can be elaborated using insights from prior studies, past experience in the chosen improvement area, and existing theories. This approach offers the advantage of better reflecting the experiences, expectations, and opinions of participants, preventing essential aspects from being overlooked from their perspective. However, it hinders group comparison due to the lack of uniformity in content.[46]

For performing the diagnosis, a review guide can be created, or the team can explore existing techniques in the market or literature and opt for those deemed most suitable. The advantage is that these techniques have been tested and evaluated by experts. This provides what is needed for a comprehensive diagnosis; however, these approaches may lack of contextualization and may not be well-suited to the institution's everyday reality. On the other hand, creating customized review guides that consider elements deemed most relevant to the specific situation and context offers the advantage of meeting current needs and interests. It better serves the specific objectives for which it is created and serves as a powerful tool for reflection and education. Combining both modalities and adapting existing techniques to suit one's own reality is also a compelling approach. Creating profiles of the temporal development of the mentioned teaching-learning process promotes reflection on educational practice by facilitating comparison with more desirable profiles. Thus, the report for this phase can include a temporal profile, like the following, to provide evidence that encourages reflection on the explored practice.[47,48]

In defining and describing the improvement area, a summary is provided of all situations where the detected problems and needs are present. Subsequently, using strategies such as the causal diagram, an exploration of the characteristics that may influence and provoke these problems and needs is conducted. To achieve this, a graphical representation is created, depicting the factors that can influence and act as causes of the problem or need. The process can be as follows: establish the team that will create the causal diagram. It is recommended that participants possess a solid theoretical and practical understanding of the problem and subproblems, and proceed to define and describe them. They need to specify the existing difficulties and needs, detailing their nature, where and when they manifest, the situations in which they arise, and the involved parties. These outcomes will be documented in the report.[49,50]

The content of the report will reflect the detected problems and needs, along with their underlying causes. Briefly, it may include a synthesis of the overall review and the more specific review, highlighting reflections on real educational practices in the chosen domain. This encompasses the desired processes, possibilities, underlying causes, maintained attitudes, and encountered problems. In the reports, value judgments are incorporated, stemming from the comparison of collected information with desirable characteristics, as defined in relevant references. References can also include indicators, evidence, tabulated responses from questionnaires, review guides, checklists, interviews, and even supplementary materials like real examples of assessment activities, exercises, assignments, and other documents. Analytical techniques, such as statistical indices and indicators, prove to be highly beneficial for synthesizing information. It is recommended to incorporate graphical representations in the reports to enhance the visualization of the provided information for later review. These visual representations aid in summarizing information and extracting themes and categories, providing a clearer description of the best educational practices in the chosen improvement area.[51]

During the improvement planning phase, the emphasis is on creating an action plan. This entails anticipating changes and innovations, with the goal of achieving consensus on one or more strategic action plans. The objective is to establish a priority order among potential alternative improvement plans. To encourage teacher engagement, it is crucial to ensure that the improvement process addresses their perceived needs and the challenges that arise in educational practice. Optimizing the chosen domain represents an innovation in the school, and as such, it requires the conviction that it will indeed lead to improvement and that the involvement of the teaching staff is essential. It involves being aware of the current situation of the school to determine which elements will be modified with the innovation, and which aspects will change compared to the present ones.[52,53]

The gathering and analysis of information are aimed at formulating the action plan or innovation process. It is crucial to ensure that decisions should be justified and agreed upon by participants, using interactive techniques like brainstorming, along with visual tools such as flowcharts or process mappings.[54]

The reports include a condensed overview of the process, detailing the upcoming innovative steps. It outlines the actions required to optimize the chosen educational situation and/or address the diagnosed needs. The goal is to address questions such as what, why, when, how, with what, and who. The assigned responsibilities can also be documented in certain reports. In this context, forming working groups is recommended for the development and implementation of the improvement plan. These groups could be organized based on departments, subject seminars, cycle or grade-level teams, or technical committees. The report could also include the information gathering plan, outlining how evidence and reference material on the planned change's progress and expected effects will be collected.[55,56]

In the implementation phase of the improvements, the objective is to execute the plan, carry out the planned activities, and collect information or evidence on its functionality and the challenges that may arise. This involves structuring the tasks, assigning responsibilities, and setting up organization and operation of each team in accordance with the anticipated improvement plan. Throughout the innovation process, evidence is gathered to facilitate a reconsideration of the planned change. To enable a subsequent review of the undertaken

process and create new action proposals for refining and expanding the previous plan, evidence and reference materials are gathered concerning the development of the planned change and its effects. [57,58,59]

Concerning the methods for gathering and analyzing useful data, one may consider using those previously mentioned in the preceding stages, among other possibilities. Therefore, brainstorming allows for an exploration of the challenges that may arise during the execution of the improvement plan. Review guides, process mapping, diagrams, and profiles are indispensable tools for assessing adherence to the predetermined and agreed-upon plan. For example, let's remember that in the specific review phase of the improvement cycle, we had mentioned a questionnaire completed by teachers to gather information regarding a training activity conducted at the institution. Suppose that, following the profile created on that occasion, enhancements have been implemented. Subsequently, during or after completing the training activity, the same questionnaire is applied once again. With the new responses, we can create another average profile that provides information about the degree of alignment of the activity to which improvements have been applied. In conclusion, the report includes evidence detailing the progression of the improvement plan, the taken actions, and the identified challenges. The information presented in this report will be the main reference for evaluating the introduced enhancements. [60,61]

Upon completion of the improvement processes, it is essential to collect additional information to assess the strengths and weaknesses of the introduced innovations, as well as the changes and effects that have occurred. To achieve this, review and improvement groups can use the same data collection and analysis techniques as previously described in the stages of general and specific review. [62]

An approach to examine changes and improvements involves comparing profiles before and after the implementation of enhancement processes. In outlining the specific review stages and the implementation of improvements, we have provided an example of gathering and analyzing information using a questionnaire completed by educators regarding a training activity in their institution. During the review phase of the introduced improvements, there is the opportunity to compare the profile obtained during the specific review phase with the one obtained during the implementation phase of the improvements.

Having examined the causes and suggesting new solutions, the efforts can be focused on consolidating the satisfactory aspects and advocating for a methodology better aligned with the identified training needs. However, qualitative information can also be used. For example, by conducting interviews, using observational techniques, administering questionnaires, and maintaining journals, a temporal profile can be created. This is analogous to the one presented in the specific review phase of the corresponding cycle, where we discussed the improvement of the teaching-learning process and illustrated with fragments of an interview with a teacher intending to participate in improvement processes. [63,64]

Likewise, creating profiles detailing the temporal evolution of a teaching-learning process helps in the quest for evidence of change. Before and after implementing the innovation, data can be gathered in a manner that enables the analysis of potential evidence of changes by comparing both sets of information transformed through a temporal profile. For example, in the specific review phase, an illustration was given through a temporal profile showing the progression of a teaching-learning process before the implementation of an improvement. Profiles can be either quantitative or qualitative in nature and are very useful not only for diagnosing areas in need of improvement and suggesting changes in classroom dynamics but also for verifying the actual implementation of previously planned changes.

The report provides an account of the development of the improvement plan, outlines the processes undertaken by the groups, identifies successful procedures, discusses encountered limitations, explores the causes of issues, evaluates the impact of the introduced improvement, and outlines areas where enhancements or changes have taken place.

Concerning the aspects and actions with the highest appraisals, as outlined in the planned improvement plan, the leadership team will contemplate the potential institutionalization of the introduced innovations. It should also contemplate the possibility of exploring another improvement area or continuing the spiral process of planning, implementing, and reviewing successive enhancements in areas that require attention. In this case, considering the gathered evidence, participants in group sessions analyze potential modifications and new improvement proposals for their educational practices.

CONCLUSIONS

In the educational processes, the review phase primarily involves a retrospective approach, looking back at the already implemented educational practices for evidence and group reflection. This process leads to the construction of an improvement plan, now emphasizing a prospective dimension focused on the future.

The improvements are applied in accordance with the reference and guidance from the prior planning. As a result, the review and enhancement processes integrate by combining both diagnostic and transformative dimensions.

At each stage, it is recommended to clearly define the objectives to serve as a guide for the process.

Data collection and analysis are commonly incorporated to energize evidence-based reflection, transcending mere opinions. Finally, the reports document achievements, agreements, and decisions, fostering continuity, reflection, and the exchange of experiences.

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