

Reflective training: teachers' representations regarding the use of a reflective portfolio for physician and nurse training

Formação reflexiva: representações dos professores acerca do uso de portfólio reflexivo na formação de médicos e enfermeiros

Formación reflexiva: representaciones de los profesores sobre el uso de portfolio reflexivo en la formación de médicos y enfermeros

**Roseli Ferreira da Silva ^{II}
Idália Sá-Chaves ^{II}**

^I Nurse. Department of Medicine, Federal University of São Carlos, São Carlos, SP. <roselifs@ufscar.br>

^{II} Licentiate in Education. Department of Didactics and Educational Technology, University of Aveiro, Aveiro, Portugal.

ABSTRACT

This investigation discusses the use of a reflective portfolio for training healthcare professionals within the Professional Practice Unit of Marília Medical School, São Paulo, Brazil. The aim was to analyze teachers' perceptions regarding the use of the reflective portfolio in the nursing and medical courses. A qualitative methodological approach was chosen. Data were gathered by means of individual interviews with the teachers. The data were analyzed by means of the content analysis technique. This analysis enabled synthesis of the points made regarding the use of the portfolio as a strategy for professional training. From the perspective of the teachers interviewed, the reflective portfolio made it possible to stimulate the students' reflective capacity and continuously follow up the processes relating to their personal and professional development. It was considered to be an innovative and also a very laborious strategy that required time and dedication from the teachers for implementing it.

Key words: Training. Reflective portfolio. Training assessment. Teaching-learning methodology. Problem-based learning.

RESUMO

Esta investigação discute a utilização de Portfólio Reflexivo (PR) na formação de profissionais de Saúde na Unidade de Prática Profissional, da Faculdade de Medicina de Marília, São Paulo, Brasil. O objetivo foi analisar as percepções dos professores quanto ao uso do PR nos cursos de Enfermagem e de Medicina. A abordagem qualitativa foi a opção metodológica, tendo a coleta de dados sido feita mediante entrevista individual com os professores. A análise dos dados foi realizada por meio da técnica de análise de conteúdo. Esta análise permitiu elaborar uma síntese de considerações sobre a utilização do portfólio enquanto estratégia para formação profissional. O PR, na perspectiva dos professores entrevistados, possibilitou a estimulação da capacidade reflexiva dos estudantes e um acompanhamento contínuo dos processos relativos ao seu desenvolvimento pessoal e profissional. Foi considerado como uma estratégia inovadora e, também, muito trabalhosa, requerendo tempo e dedicação dos professores para implementá-lo.

Palavras-chave: Formação. Portfólio reflexivo. Avaliação formativa. Metodologias de ensino-aprendizagem. Aprendizagem baseada em problemas.

RESUMEN

Esta investigación discute la utilización del Portfólio Reflexivo (PR) en la formación de profesionales de Salud en la Unidad de Práctica Profesional, de la Facultad de Medicina de Marília, Brasil. El objetivo fue analizar las

percepciones de los profesores acerca del uso de PR en los cursos de Medicina y Enfermería. La aproximación cualitativa fue la opción metodológica. La recolecta de datos fue llevada a cabo mediante entrevista individual. El análisis de los datos fue realizado usando la técnica de análisis de contenido. Este análisis permitió elaborar consideraciones sobre la utilización del portafolio como estrategia para la formación profesional. El RP, según la perspectiva de los entrevistados, posibilitó el estímulo de la capacidad reflexiva de los estudiantes y el acompañamiento continuo de los procesos relativos a su desarrollo personal y profesional. Fue considerada una estrategia innovadora, y también muy trabajosa, exigiendo tiempo y dedicación de los profesores para implementarla.

Palabras clave: Formación. Portafolio reflexivo. Evaluación formativa. Metodologías de enseñanza-aprendizaje. Aprendizaje basado en problemas.

Reflective training: paradigms undergoing change

In contemporary society, professional healthcare training is being challenged by a new perspective that requires new reference points to be sought, within new paradigms that interconnect education, healthcare and development, and which uphold the importance of training from the perspective of reflective professionalism.

The paradigm of technical rationality, characterized by models that tend to lead to uniformity and matrix reproduction, is no longer sufficient in terms of its logic and presuppositions to face up to the challenge of nurse and physician training, from a humanistic perspective that, as such, integrates the personal and professional dimensions of training and human development.

As is recognized, generations of professionals have been trained based on processes of information transmission, repetitive practice and dichotomous perspectives that separated theory from practice. The results from this are still evident today in the traits of mechanistic, individualistic, uncritical and reproductive professionalization of healthcare work.

However, it is evident that such practices are unable to respond to the dynamic and uncertain characteristics of the contexts. The great emerging unpredictability of the dynamics that organize these practices suggests that training should include the personal and professional dimensions*, from a perspective of reflectiveness that makes it possible to produce critical professionals with a commitment towards social transformations who have the scientific and technical competence to take on the complexity of healthcare.

* These guidelines (personal and professional) are taken here to be within a combined environment of coupled nature, i.e. as an intrinsic functional process that is united and indissociable.

Based on this new critical-reflective paradigm, schools, as training institutions, need to contribute towards the training of professionals who have a profile of competence that makes it possible for them to intervene within their work context, in a critical, collective and integrative manner. In other words, schools need to contribute towards developing a culture of active citizenship among future professionals, through making them increasingly responsible, participative and active in transforming the contexts of work and life. For this, it is fundamental to stimulate, among students undergoing training, the development of their capacity to understand, in both an overall and a systemic manner, the problems that the specificity of contexts and their respective circumstances pose for them.

This is a question of stimulating the capacity to perceive aims and purposes, people and their motivations, events and the relationships that are established between all of them, in an integrated manner. According to Alarcão (2003, p.23), this is an understanding that “is based on the capacity to listen, observe and think, but also on the capacity to use the various languages that allow humans to establish mechanisms for interaction and mutual comprehension with other people and with the world”. These capacities are needed for training future nurses and physicians from a much more comprehensive perspective that goes well beyond the indispensable technical training, thereby truly constituting education for active citizenship that will enable professionals to intervene in complex and challenging situations.

According to Freire (1999), from this perspective, learning becomes a creative adventure for future professionals: something that for this very reason becomes much richer than mere repetition of the lesson given. Thus, learning consists of construction, (re)construction and observation, in order to be able to intervene and change. In this passage through apprenticeship, trainees will become critical subjects with epistemological curiosity, who construct knowledge starting from problems posed in relation to the study subject, with active participation in this construction. According to the same author, this relates to the “capacity to learn, not only for adaptation to reality but also especially for transforming, intervening in and creating it” (Freire, 1999, p.77).

Within this context, teachers and trainers have the responsibility to help trainees to gradually develop the capacity to transform the information into knowledge that, when reflected on in the light of universal values, may guide the way to act wisely. Moreover, according to Alarcão (2003, p.30), “training professionals who are capable of interacting with knowledge in an autonomous, flexible and creative manner is the best preparation for experiencing our very complex and uncertain world that is always inclined to demand new knowledge that inspires new actions”.

According to Schön (1983) too, the actions developed by trainees should always be reflected on, since it is through reflection on the practices developed, evaluated and continually reassessed that previous knowledge is reconstructed. Through this, new understandings of the phenomena under analysis may emerge, from the perspective of integrating the theoretical reference points and the information that only comes from practice.

According to Sá-Chaves (2000a), professional knowledge can be understood not only through its multidimensional structure of material from different categories of knowledge, but also especially through its epistemological nature, i.e. as knowledge in action, which is open, dynamic and flexible, and therefore capable of becoming responsive to the specific features of each situation and instant.

From this perspective, a new shape for the curriculum becomes indispensable, in order to enable progressive construction of reflective professionalism. For this, the curriculum should be understood as praxis, and not as a static object, or better, as metapraxis, which enables transposition of knowledge of a cognitive nature to the domain of action, i.e. as competence understood as knowledge in use (Perrenoud, 2000).

This focus is considered to integrate pedagogical material and actions, since the study plan and the different types of teaching make up a single unit, such that the teaching-learning process is seen as the set of activities that transforms the program into practice, in order to produce learning, i.e. to produce comprehension and knowledge (Silva, 2000). According to Libâneo (1998), this concept of a curriculum that is implemented and gains meaning in practice surmounts the dichotomy between theory and practice that is sustained by the technicist approach.

Sá-Chaves (2005) stated that using the strategy of a reflective portfolio is, to a large extent, a response to this “new” training philosophy. Corroborating this idea, Nunes and Moreira (2005, p.53) wrote that using such a portfolio in the teaching-learning process was in harmony with reflective pedagogical thinking, since “it gives students opportunities to reflect, diagnose their difficulties, self-assess their performance and self-regulate their own learning”, thereby taking on a metacognitive dimension in their development. Sá-Chaves (2000b, p.15) emphasized that this strategy allows trainee professionals to achieve:

Expansion and diversification of their viewpoint, thereby stimulating decision-making and the need to make choices, judge, define criteria or allow doubts and conflicts to invade, so that from these, such individuals can emerge more aware, better informed, surer of themselves and more tolerant towards other people’s hypotheses.

According to this author, such portfolios have been used in many areas of professional training. They fulfill an important role in various educational contexts, as a strategy for boosting the construction of knowledge in a reflective manner, with a view to progressive emancipation of the subjects undergoing training. Moreover, this has been gaining new meanings over recent years.

Investigations carried out within different fields of knowledge in relation to this strategy have recognized its advantages. Along these lines, Grilo and Machado (2005) reported the following as benefits from its use: the opportunity for a more systematized and continuous reflective process, centered on the multiple dimensions of practice; a space for systematic questioning of practices in work situations; promotion of trainee

development starting from trainees' own experiences, motivations and needs; the opportunity to develop self-assessment and self-knowledge processes among trainees, through raising their awareness of their strengths and weaknesses; and the opportunity for assessments that are more authentic, more dynamic, better grounded and more participative.

Apóstolo (2005) also mentioned the impact that the construction of a reflective portfolio had on the learning and development of future nurses. The advantages mentioned were personal and group development; reflective, critical and non-routine learning; development of competence regarding planning and investigative capacity; valuing of other people's work; making assessments objective; and learning through managed competition, which the author explained as the capacity, within the group process, for students and teachers to deal with competition within the bounds that allow the group to function.

When trainees are not familiarized with the portfolio strategy and/or mechanisms that allow reflection on their own learning, there may be certain initial negative impacts from their use. In this respect, Nunes and Moreira (2005) reported that analyses performed during the initial phase of constructing the portfolio revealed certain constraints, such as the invisibility of the subject in the narratives; absence of narratives with reflective inclination; and lack of integration between form and content in the narratives.

From the perspective of the training of active and reflective subjects, certain training principles relating to the process of knowledge construction that, as such, are present in drawing up the portfolio, need to be carefully taken into account.

Sá-Chaves (2005) emphasized the principles of personhood, self-implication, awareness-raising, unfinishedness and continuity of training. According to this author, the basic foundation of the principle of personhood is recognition of the person. It is through the relationship of learning between trainer and trainee, by means of the portfolio, that the singular ways in which trainees learn how to do things and how things could be done within the specific context of their work are established. Thus, self-implication occurs, i.e. involvement and commitment of the subjects to themselves and to others, which comprises an enriching element within their personal outlook.

This expansion of perspectives constitutes what Sá-Chaves (2002) called the principle of the multiplier effect of diversity, insofar as the groups interact to construct shared knowledge. It is in this process that awareness-raising takes place, when trainees revitalize their own convictions and knowledge, through expanding the respective frames of reference and opening up new spaces for contextualized understanding and future action.

Finally, the principle of continuity of the training process is given by the nature of the unfinishedness of the learning process, which is perceived within this perspective as a lifelong continuum.

A program of curriculum innovation

This program refers to an innovative curriculum developed at Marília Medical School (Famema), within the scope of the medicine and nursing courses, which forms part of a continuing movement of curriculum change that began in 1997 (Zanolli, 2004; Komatsu, 2003; Lima, 2000; Silva, 2000).

This investigation forms part of this process of change in the training of physicians and nurses at Famema, and relates to the years 2003 and 2004. At Famema, the curriculum plans were integrated and interdisciplinary, and they included innovative methodological and pedagogical processes that had been developed in small groups and were directed towards the development of the expected professional competences for these healthcare professionals within the Brazilian context.

Another fundamental characteristic of the curriculum plans for both courses was diversification of the teaching-learning scenarios. This included wide participation by students and teachers in the public healthcare services of the municipality, thereby fulfilling a fundamental mission regarding training for healthcare professionals, i.e. contributing towards constructing new practices within this scientific domain, with a strong social impact. It should be emphasized that all of this transformation of the curriculum plans was consonant with the curricular guidelines at national level. Thus, the curricular transformation had great legitimacy for developing the training in general.

As conceptualized by Bronfenbrenner* (1979 apud Portugal, 1992), in this proposal, trainees are regarded as dynamic subjects undergoing development, who move forward with progressive restructuring and recreation of their setting; the environment influences trainees' development, in a process of mutual interaction; in the development process, not only does the immediate context with which trainees are involved have an influence, but also the interrelationships between the different contextual levels. From this perspective of the training, the development of future professionals acquires broader conceptualization: differentiated and validated from the ecological environment, they become motivated and capable of developing activities that allow them to discover, maintain or change the properties of this environment.

* From a theoretical perspective of human development, this author interpreted a new conceptualization for the development of individuals and the environment and the interaction between them, i.e. the interaction between subjects and the world and consequently between development and ecology, within human development (Bronfenbrenner, 1979).

What is proposed within this movement for change is to adopt a socioconstructivist approach towards education, in which the school provides the conditions for learning how to act, operate, create and construct, starting from the realities experienced by teachers and students. In other words, it provides active construction of knowledge for the subject of the learning. This takes place through interaction with the setting, either in

its physical or social dimensions, with human symbolism and with the world of social relationships (Becker, 2005).

This training proposal is of critical-reflective nature, and is sustained from a perspective of knowledge construction based on problems posed in relation to reality, i.e. on connecting theory with practice and on active participation by the future professionals.

Thus, in 2003 and 2004, for the first two years of the two courses, the curricular plans started to be guided by the development of professional competence*, and no longer by educational objectives, which is the commonest perspective in traditional curricular plans. For this, the following areas of competence were designed for nurse and physician training: care for individuals' health needs; care for collective health needs; and organization and management of healthcare work.

* Within the context of this project, we took the concept of competence as the capacity to mobilize different resources to pertinently and successfully solve problems of professional practice, within different contexts. The resources were the personal capacities (cognitive, psychomotor and affective) that, when combined and interacting with the potential of contexts within this perspective, shaped the singular way in which each professional carried out the daily activities (Famema, 2004).

The study plans were organized within each year by interdisciplinary educational units, for exercising the respective profession within the perspective of social intervention. In other words, each of the years had two units that were structured by performance* and designed for each of the fields of competence that were expected for the students in each year: the systematized unit and the professional practice unit.

* The performance translated the visible dimension of competence. In this program, there was an assessment element for each year.

The systematized unit was organized based on real situations of professional practice that were structured in the form of problems on paper. Thus, the stimulus for the learning was a representation of reality. The problem situations had been constructed previously by the teaching staff and the focus of the activity was predominantly educational. The methodology used was problem-based learning (Venturelli, 1997).

In this methodology, one of the learning strategies was small-group work, with tutorial sessions. Small-group work is one of the cornerstones of problem-based learning, since this strategy promotes active participation by the students during the process of constructing their own knowledge. From the stimulus presented (the problem on paper), the students mobilize their capacities, knowledge and previous experiences for discussing, understanding and reflecting on the situation presented. In addition to promoting and developing the capacities of cooperation and collaboration in the collective work, this process undoubtedly promotes the capacity of learning to learn.

The other unit, called the professional practice unit, was constructed based on the students' experiences from real contexts, in the way in which they occur in professional practice (Famema, 2004). Thus, the axis for knowledge construction became the practice itself, i.e. knowledge was constructed from the content-material (cognitive, affective and psychomotor) that emerged from questions within the (pre)professional practice, and no longer through predetermined topics, as seen in traditional training. This construction occurred within a process of reflection on and about practice, in accordance with the reflective perspectives underlined by Alarcão (2003), within a pedagogical process that was also grounded in the presuppositions underlying significant learning.

As interpreted by Coll* (2005, 1987), this type of learning takes place when subjects learn content-material through attributing meaning to it. This is constructed whenever individuals are capable of establishing substantive and non-arbitrary relationships between what is learned and what is already known.

* César Coll harmoniously brought together some ideas of grand theories that underlie the present use of the concept of significant learning.

Thus, several pedagogical strategies were needed to develop this educational unit. The first was to introduce the students into real scenarios of professional practice, which through their capacities and previous knowledge and by means of comparison with the new experiences provided by these scenarios, made it possible to arouse their epistemic curiosity and motivate them to explore, discover, learn and understand the situations they went through.

This exploratory activity thus became a powerful instrument for acquiring new reference points that facilitated significant learning. This was also a form of learning that, starting from personal experiences, allowed the students to learn more about themselves, thus leading to a process of progressive discovery and resignification of their own identities.

During the first two years of the medicine and nursing courses, the real scenario for practice was the context of family healthcare units. Within this sphere, the students (four nursing and eight medical students) remained together for the two years in the same group, thus forming a true work group. The group also included two teachers (one physician and one nurse).

From the real healthcare work among individuals, families and communities in the area of coverage of the family healthcare unit, the students and teachers took on the responsibility for caring for them according to the degree of autonomy that the student presents and develops during the practice in each year. This strategy provided students with links and shared responsibility with all parties involved in the care process: patients, family members, professionals in the healthcare team, colleagues and teachers. The healthcare activities developed by the students had to be relevant concomitantly for the learning process, healthcare service and community.

Another strategy for constructing knowledge in an autonomous, responsible and significant manner that boosted personal experiences from practice

aligned with personal and professional development was to set up preprogrammed learning situations in small groups, in order to reflect on the practice. Thus, the experiences, comparisons between them and reflections in small groups constituted what we called the learning cycle.

Hence, in this curricular unit, personal attributes (cognitive, affective and psychomotor) were developed through carrying out tasks inherent to professional practice (comparisons of experiences). This sustained integrated reflections on values, knowledge and skills that each student already had, as previous capabilities, and the emerging construction of new perspectives and capacities that favor understanding of meanings and learning as a function of experimentation in a real context.

In summary, the main steps in the teaching-learning process as training strategies for the professional practice unit, thereby forming the learning cycle, were:

- . Performing task and activities* in real situations of professional practice (comparison of experiences). These comparisons with each situation require dialogue and interaction with the situation, and in this manner, students will go on extracting from the contexts and providing interventions in them. These activities allow the subjects (students/teachers) and the purpose (care) to be constructed and reconstructed during the process: the subjects will become aware of their professional roles and roles as citizens in the world.

* These are “programmed” activities, i.e. ones that are expected for the level/year that the student is in.

- . Drawing up an initial (provisional) synthesis of discussions conducted through reflection on situations experienced in relation to practice, considering both the students’ previous capabilities from a psychological, cognitive and affective point of view and their dynamic capabilities of a sociocultural nature. From this, knowledge gaps can be identified and new learning questions can be raised. This moment of reflection takes place in small groups, in which the teacher takes on the role of mediator for the construction of knowledge, thus making this a true exercise in shared reflection. The beginnings of self-implication of the subjects with themselves and with others are found here, thereby finding and revealing individuals: becoming aware of their capacities and knowing their own learning process.

- . Identification of sources and research for analysis, and gathering of information that is coherent with the emerging questions. This is an individual moment for knowledge construction. In this individualized learning process, it is seen that the subjects respect their own singular ways of learning, according to their pace and style of learning, i.e. this is done through taking into account the principle of personhood.

- . Drawing up a new synthesis that goes into greater conceptual, scientific and methodological depth based on individual investigation and structuring of the learning questions. As with the provisional synthesis, this takes place in small groups. Knowledge is constructed collectively, to the extent that the subjects (teachers and students) interact and seek support towards going

more deeply into a question or query, in order to construct knowledge. Thus, there is a multiplier effect from the diversity of perspectives and contributions.

At the end of each meeting of the small groups, some time was dedicated to systematized assessment of the training. This was a moment for assessing the learning process in which students made self-assessments and assessments of their peers and teachers. At the same time, and in the same way, the teachers made self-assessments and assessments of their students. These training assessments were of qualitative nature and were done continuously and interactively. They allowed both sides to be aware and diagnose the learning situation, thus leading to reorientation of the process of constructing knowledge for each of the individuals involved.

The third strategy was to use reflective portfolios. In this, through narrative discourse, the students recorded their reflections relating to the main points of the learning cycle. The portfolio was shared with the teacher, who gave feedback and enriched the training dimension with new information and new perspectives.

According to Sá-Chaves (2000a), this communication (which constitutes the essence of the training relationship between the teacher and each student) provided continuous support of cognitive, affective and personal nature in the professional training and development processes. In their personal narratives, students were also stimulated to undertake a reflective process in relation to their own process of knowledge construction, through questioning that was kept open with their teachers. This strategy sustained the principles of constructing reflective, participative and contextualized professionalism.

The whole process of knowledge construction was systematically mediated and enriched by the teachers: in individual contacts between students and teachers, when the students were being monitored in their practice; in the small-group learning sessions; and in the progressive construction of the reflective portfolio.

Thus, teachers had a distinct and complex role in this training, in that they continually stimulated reflection by means of questioning that they brought into the reflective process, i.e. by putting forward questions that aroused deepening of students' reflective thinking, with an implied need to seek specific information corresponding to their processes of knowledge construction.

The reflective portfolio strategy for training

As mentioned earlier, in the case of training in the medicine and nursing course, and specifically in the professional practice unit, the portfolio was used as a strategy for boosting systematized and systematic reflections on the practices developed.

Through this, it was sought to ensure that the process would lead to construction of contextualized knowledge and personal and professional development among those involved (teachers and students). This favored comprehension of the possible meanings attributed to the situations and

concepts that constituted the core of the learning, thereby stimulating critical and reflective development among the trainees.

As an intentional strategy, the portfolio formed support for the summative and formative evaluation processes, especially the formative evaluations performed by teachers over the course of the training process. Formative evaluations allow solutions to be sought in good time for students' cognitive, affective and psychomotor conflicts, scientific gaps and omissions, thereby ensuring the conditions for progressive development of students' awareness levels and consequently their emancipation and identities. However, summative evaluation also allows this, in that when the training period to which the portfolio refers has finished, this type of evaluation gives wide-ranging evidence of the results and processes that determine it.

In the present study, the construction of the portfolios by the trainees included this double dimension of training (reflective and evaluative). For this, the students organized their portfolios according to learning cycle, by recording their reflective production in the form of narratives covering the teaching-learning process. For this situation of knowledge construction, the portfolio was organized in three parts, to accompany the main points of the learning cycle.

The first part included the narratives relating to situations within professional practice. In this process, teachers monitored students' evolution regarding the reflective focus. According to Sá- Chaves (2000b), this may present different levels: technical, practical, critical and metacritical. The technical level corresponds to the correct and detailed description of the episodes of practice experiences by trainees.

However, trainees may be stimulated through questioning them, thus enabling critical analysis i.e. introducing elements into the narrative other than a mere description of the facts.

At this level, students identified the multiple and possible causes, consequences and meanings of the phenomena under examination. They reflected on the role of contexts in determining the facts, on the functions and roles performed, on the concepts that sustained decisions and, furthermore, on the new possibilities and functions that could come to be performed in the light of new perceptions of the problems. Within this picture, students could develop reflections about themselves, at metacritical level, through questioning their performance, functions and underlying concepts, thus concomitantly becoming the subject of their own reflections. In this way, the training relationship that was established collectively allowed students to (re)structure and ground the construction of their own knowledge, insofar as through acting, reflecting and narrating the facts and their roles over the course of these events, they elaborated and (re)elaborated on their previous knowledge.

The second part brought together the individual records that each student had elaborated from the reflections that were produced in the groups, on the situations experienced and the learning questions elaborated. In guidance for significant learning, each of the students singly and singularly constructed the content-material learned, to the extent that the "old" and "new"

knowledge went on producing new and enriched meanings. The collective constructions around the learning questions produced in the groups were added in this part.

The third part corresponded to procedures relating to the evaluation process, in which students and teachers recorded assessments of the students' development over the course of the professional practice unit.

In this process, learning takes place through discovery, in which students acquire knowledge through their own means, using their own capacity to think, adapted to their needs. This process is always mediated by interventions from teachers, in which students participate fully and effectively (Coll, 2005).

The investigative process

With the conviction that reflective portfolios might contribute towards developing both the trainees and the trainers, we carried out an investigation during this training program with the aim of showing the contributions that this strategy made towards developing reflective professionalization.

We also accepted the possibility that this case might become an instrument for awareness-raising and dissemination of the potential of the portfolio for training healthcare professionals. Furthermore, it might contribute towards the process of continuing re-conceptualization and development of the curriculum at Famema.

Because of the nature of the study objective, the investigation used a methodology that was characterized as a case study, within the scope of approaches of qualitative nature. The aim was to identify and reflect on the teachers' perceptions regarding the use of reflective portfolios within the professional practice unit of the first and second years of the medicine and nursing courses.

The study subjects were all of the teachers (both physicians and nurses, totaling 13) who, for two consecutive years, participated in the professional practice unit, either in the first years of 2003 and 2004 or in the second year of 2004, in which elaboration of reflective portfolios was used as a training strategy.

Data were gathered by means of individual interviews with each of the 13 study subjects, using the method usually called subject-centered interviewing. The use of this technique was based on the possibility of exploring questions that had previously been defined by the investigator, through a theoretical framework grounding the multiple dimensions of the study, combined with new questions that emerged during the investigative process, particularly while conducting the interviews.

In developing this investigation, the ethical precepts relating to procedures for institutional authorization were respected, with an opinion from Famema's Ethics Committee for Research on Human Beings. Resolution number 196/1996 from the National Health Board (Conselho Nacional de Saúde) was also observed, with regard to a statement of researcher responsibility and a free and informed consent statement made by the subjects who agreed to participate in the investigation.

In the data analysis process, the content analysis technique proposed by (1977) was used. This consisted of an initial quick read through each of the protocols that resulted from transcribing the interview recordings, with the aim of recognizing the text and warming up the investigator with impressions and orientations, so that the proper data analysis could then begin.

Next, a second reading was made, to identify the registration units, without breaking the conceptual and investigative coherence. A coding process followed on from this, consisting of transformation of the raw data that appeared in the text. Through cutting up the text and classifying and aggregating the pieces, this transformation process allowed a representation of the content to be achieved, with the aim of categorizing it.

The coding was done by phrases, in which each phrase represented one registration unit, i.e. one unit of meaning that expressed one thought regarding the concepts underlying the categories. This coding was expected to reveal the registration units that dealt with the same topic, i.e. the different ways of covering the topics, and which revealed similar ideas.

The third step consisted of categorizing the registration units into groups that had common elements of meaning, i.e. the same message. This step had the primary objective of supplying a simplified representation of the raw data that would be analyzed in the light of the theoretical framework and reference points on which the study was based. This was the context within which the respective analyses on the data are presented below.

Reflective portfolios: analysis of teachers' perceptions

Seeking to find out what the teachers' perceptions regarding the use of reflective portfolios in the professional practice units were, two major categories could be constructed from the different words used by the interviewees: the portfolios as a strategy for personal and professional development among medical and nursing students at Famema; and the significance of the portfolios for teaching work in the professional practice units.

The portfolios as a strategy for personal and professional development

From an overview of the results, it can be stated that in this category, the principles previously expressed regarding the process of knowledge construction from the perspective of reflective training were observed. Thus, reflective portfolios were seen by the teachers as a powerful strategy for student learning, because they stimulated self-reflection and therefore helped to develop self-knowledge. In other words, they allowed students to develop skills for finding out about and revealing themselves, in a process of awareness-raising regarding their own processes of knowledge construction, which can be interpreted as the principle of either personhood or awareness among the subjects who are learning.

In this sense, reflective portfolios were taken to be a strategy for activation of learning and construction of knowledge, within either the personal or the

interpersonal dimension. We have selected some excerpts from the words of the research subjects that illustrate the idea that reflective portfolios are a strategy for constructing knowledge reflectively, and for incorporating the principles of personhood and professionalism.

The subjects made it clear that reflective capacity was expressed in the reflective portfolios to the extent that students reflected on their own practice and capacity, which were progressively constructed from the descriptions of the tasks performed, as shown by the following words: “You notice that students become more reflective with time. They manage to bring out reflections on their practice and about themselves, and this is very clear over time” (E2); “Over this time, the portfolios have been making students reflect more with better self-assessment” (E3); “Portfolios provide a moment of reflection, and so they give the possibility of seeing how students are doing this: whether they are managing to reflect or whether they are just observing” (E8).

With regard to the principle of personhood, it was reported that reflective portfolios allowed individualization of each of the students, thereby particularizing their learning processes and identifying the gaps in their knowledge and the respective doubts. Thus, each student was recognized by the teachers as a unique “being”. Hence, the teachers monitored the process of students’ personal development and, within this, the progressive elaboration of the reflective portfolios made it possible for the teachers to deal with the singularities of each of the students. This can be seen from the following examples: “Each student is unique. It’s possible for us to monitor students individually and see [...] what conflicts they have and how we can help them. We can provide support: that’s our role as teachers” (E3); “Portfolios allow us to get closer to the students, monitor their evolution and help them to construct knowledge [...] Portfolios allow us to get to know students: not just whether they are studying or not, but in relation to the values and attitudes that they construct” (E5); “Portfolios have helped me to identify gaps in knowledge and students’ individual needs [...] with greater specificity” (E13).

Reflective portfolios were also seen by the teachers as a space for constructing critical and reflective professionalism, through interaction between teachers and students, i.e. the construction of professionalism as an affective, cultural, social and communicational process. The following are some of the words that corroborate this idea: “It’s interesting for you to see, when you look through a portfolio, it tells you all about the path that the student followed during that year: not just what he did, but also what he learned, the experiences that he had, and what he has been through” (E7); “For me, the most important thing is the possibility of monitoring how the student is dealing with the evolution of his learning: how he is seeing his problems and the obstacles that appear” (E11); “In the portfolios, you can see a change, in that there is a progression in relation to the quality of the (clinical) histories, and the question of the data that are gathered; the particular way in which learning questions are drawn up” (E12).

The significance of the portfolios for teaching

The teachers were very positive about the significance of the use of reflective portfolios as a strategy for monitoring and continuously assessing the development of each of the students, and as a self-assessment instrument for teachers. Even though they recognized that this way of monitoring students' evolution was laborious, it was considered gratifying and brought out a feeling of happiness and satisfaction among the teachers: "It's a dialogue at the same time as I'm telling them what they have to improve. The portfolio also tells me where I can improve, so it's a two-way passage" (E8); "Since the outset, I've thought that it's interesting and valuable, even without clearly seeing its power, [...] over the course of using it, even with all the difficulties that I've had in using it, I've never thought that it shouldn't be used" (E9); "The portfolio has helped me to help them, so I think this is a fantastic thing: both for students who learn more easily and for me, learning with their difficulties. It's also very interesting for me to see my difficulties through it" (E11).

Reflective portfolios were highly valued as an instrument for formative evaluation that allowed solutions to be sought in good time for students' cognitive, affective and psychomotor conflicts, scientific gaps and omissions, thereby ensuring the conditions for progressive development of students' awareness levels and consequently their autonomy and identities. The words that confirmed this view of reflective portfolios as an instrument for formative evaluation were the following: "Portfolios are individual: narratives that allow you to evaluate different times of the students' progression and make it possible for teachers to give feedback at these different times" (E2); "The portfolios was very useful for monitoring the evolution of learning, from the point of view of noting the changes in students' perceptions" (E13); "I think that this is a strategy that has to be used much more, because of its importance and the possibility of monitoring the students" (E7).

Some final considerations

Analyzing the findings from this study in the light of the theoretical framework on which it is based, with a critical-reflective paradigm as the reference point, and taking a contextualized-ecological approach to training, it seems possible to conclude that the reflective portfolios used in the professional practice units were coherent with Famema's pedagogical and curricular proposals for training physicians and nurses. Moreover, the portfolios were in harmony, in a linked, complementary and integrated manner, with the teaching and learning methodologies used in this unit.

From the teachers' perspective, reflective portfolios made it possible to stimulate the students' reflective capacity, with supervised and continuous monitoring of the processes of personal and professional development. The teachers considered that it was a very new strategy, in relation to Famema's curricular path, and they still saw it as laborious, requiring time and dedication from both the students and the teachers for implementing it. One

extremely positive factor was the favorable reception among the teachers regarding the use of this strategy in the training processes.

In summary, we believe that institutional support is required for this type of strategy to be maintained and deepened. It is especially important to promote and stimulate capacitation among teachers and students for its development. In other words, it is important to develop integrated training programs centered on this strategy, in which the development of collective metareflective and metacognitive training capacity may allow more appropriate use of the time that students and teachers dedicate to carrying out activities to elaborate and use portfolios than expected.

Collaborators

The author Roseli Ferreira da Silva participated fully in all stages of compiling the paper. Idália Sá-Chaves participated in the discussion, writing and revision of the text.

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ⁱ Address: Rua Vitor Manoel de Souza Lima, 410, apto. 31, São Carlos, SP, Brazil. 13.561-020