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CONCEPTIONS ABOUT EVALUATION OF LEARNING IN HIGHER EDUCATION

THE CASE OF NURSING EDUCATION

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ABSTRACT

Objective: To analyze the conceptions about apprenticeship evaluation in higher education and the case of nursing teaching.

Methodology: a descriptive and essay study of conceptual analysis based on the theoretical reference.

Results: The learning-centered teaching model refers is operationalized by the design of strategies that lead the students to learn, guided by the teachers. This model takes a dynamic perspective, focuses on the principles of the Bologna Declaration and breaks with the traditional model of education, dominant in Europe until the late 1980s. The evaluation of learning in the different pedagogical models results from a set of intentional actions whose centrality shifted from student performance to the processes that lead to certain performances. Emerge the appreciation of the contexts and stimuli that provide environments for learning. The approximately two decades of integration of nursing education in higher education followed the paradigm changes, simultaneously with the process of adaptation and integration that occurred.

Conclusion: It should be noted that the evaluation of learning in Nursing (as in other areas) is not apprehended by praxis. The inherent conceptual schemes must always be ascertained from the pedagogical models that support the relation of teaching and learning, according to the principles of Bologna.

Descriptors: Higher education; learning; nursing education.

INTRODUCTION

Theorizing about learning assessment in higher education is part of a perspective of dynamic complexity. The breakaway from the traditional model of education began in 1999 when the principles of the Bologna Declaration were accepted in Europe. By 2005, conventions and declarations clarifying the principles of organization, operation and purpose were signed in order to achieve the European Education Area. The training starts being organised from the learning, causing a breakaway from the traditional training model centred around teaching. Curricula are also shaped by the skills to be acquired and the learning outcomes.

In Portugal the year of 1988 marks the integration of nursing education in Polytechnic Higher Education. In 1999, the ordinance approving the Nursing Degree regulated the study cycle, based on the conception of the relationship between teaching and learning: different teaching methodologies conducive to the expected acquisitions[1].

The learning-centred teaching model attaches different roles to teachers and students, their operationalization presupposing the design of strategies that lead the students to learn, guided by the teachers. The responsibility for teaching and learning processes separates the teacher-teaching and student-learning binomials and aligns the teaching and learning processes with the teachers' and students' performance. Assessment is a part of teaching and learning and is in line with concepts about teaching and learning. It is a systematic, planned process through which data is collected on the knowledge and skills of students. The evaluation of data by teachers and students makes it possible to gauge teaching and learning processes and leads to improvement[2].

The concept and practices of student assessment have changed over time, however, it has remained unchanged that the person being assessed has to take some kind of test. What changed was the type of test, the purpose of the assessment, the use of the results of the assessment, and the greater or lesser "weight" of the environmental, social and cultural contexts considered in the assessment. The conceptualisation of assessment assumes theoretical postulates that are variable over time. As a part of the principles of positivism, assessment was essentially understood as a "measurement" focusing on products or results. The structuralist trend has defocused assessment from results to procedures, thus introducing a new dimension: management and regulation. Parallel to the structuralist trend, the systemic models have assessment at the centre of the processes that accompany the practices. Progress has been made towards increasing the complexity resulting from the introduction of new variables in the field of assessment.

Assessment is subordinated to the assessor, since when making use of their reference models they value and prioritize the assessment indicators in a proper way. The assessment acts depend on the quality of the assessor's perceptions and the elements of the assessment situation[3].

DEVELOPMENT

Learning Assessment

Assessment is a process associated with innumerable human activities, in relation to people and the environment. "Assessment is, etymologically, a reflection on the relations of values"[3]. Conceptualising assessment requires the clarification of the nature of the assessment that is intended to be studied and, in the scope of this study, it is assessment in education that is the focus. Considering assessment in education is still a universe whose limits are vastly broad. Assessment in education can include all contexts of education:

Institutions, projects and programs, services provided and the assessment of all professional groups involved. Considering assessment in education as the object of study would raise a spectrum of variables too vast, so it is assumed that the object of study is learning assessment. Knowledge in assessment exists in the form of organized and networked concepts that are based on theorizations and on different models for approaching assessment. The conceptions of assessment that guide the practices emanate from theory and make it possible to analyse the process. Assessment as an object of study can be considered in the following dimensions: processes, practices, techniques and methods[3].

The conceptualization of assessment can have, as a starting point, a chronological reference which is not reflected in a linear way in its application, since the concepts and previous theorizations are mobilized for the present time in processes of recovery and renovation that differ according to the field of application. The evolution of the concepts takes place in the sense of increasing complexity from the psychometric and behaviourist conception to the constructivism references[4]. Complexity can be understood as a result of the simultaneous use of all assessment concepts.

In the literature review, the assessment concepts vary between the actions used to assess, the processes and the postulates from which the assessment is conceived. The processes also include the description of actions, but are organized on the basis of previous theorizing that organizes them. "Assessing can mean, among other things: verifying, judging, estimating, situating, representing, determining, giving advice... Checking what has been learned, understood, retained. Checking acquisitions as part of a progression. Judging a job based on the instructions given; judging the level of a student in relation to the rest of the class; judging according to pre-established rules."[5]. In comparison with the multiplicity of concepts, the author considers that in pedagogy, assessment presents a constant centrality characterized by the existence of a learning process directed to people that will be considered based on specific dimensions such as abilities, skills or productions or even when people are considered from a global perspective.

The concepts must be taken from the epistemological perspective of assessment because it is from this that the models are created. This is how the authors refer to assessment: epistemological position - concept - pedagogical model. The model shapes the pedagogical structure that supports the educational practices in which the assessment is integrated[3,5,6]. Assessment was initially conceptualized as a measurement and was thus understood during the first half of the twentieth century. During this period the emphasis was the measurement obtained through parameterized tests in search of objectivity in the results. The dominant models only regarded what was measurable as the object of assessment and aspects that remained beyond what the instruments measured were not considered.

Assessment and measurement were similar concepts, therefore that which was not measurable was taken from the assessment[5]. It emerges from this conception that "The value judgment obtained from the measurement when compared to the established norm, is an assessment"[7] or the assessment consists of "measuring the students' capabilities and comparing them with each other"[4].

Assessment as the *study of effects*, theorizes it according to an explanatory model that establishes a causal relation between variables or phenomena: the effect of a cycle of studies in the students is apprehended by the assessment made. In this concept, the assessment is accomplished through quantification instruments whose results are compared to a predefined metric. It is a linear and reductionist concept, considering that the effects are explained by multiple factors[3]. The principle of cause-effect relationship attributed to assessment is also found in the concept that defines it as "a judgment of value on the cognitive and behavioural aspects produced as a consequence of the students' educational experiences and activities"[7].

Assessment as a measurement fits into the feedback concepts and its purpose is regulation. Measuring is the most anchored definition of assessment that is present in education, in business, and in other social areas. Assessment as a measurement answers questions such as the value of what is done or what is changed[3]. In education, assessment as a measurement integrates into the pedagogical model where the teacher is the active element, the holder of knowledge and the student is the passive element. Assessment occurs at the end of the teaching course with the purpose of confirming what has been learnt. Negative results are attributed to the student who does not learn.

Assessment is *"the act by which a judgment of "value" is formulated focusing on a given object (individual, situation, action, project, etc.) by means of a confrontation between two series of data that are compared:*

- *data which is of the order of fact per se and relates to the actual object to be assessed;*
- *data that is of the order of the ideal and that relate to expectations, intentions or projects that apply to the same object"*[5].

The judgment can be made by comparing the students with the others or comparing their production with a predefined norm. The author's conception exposes two concepts: referent and referred, defined as the ideal standard or norm of value and the real or observed, respectively.

Value is what grounds the quality of an object or behaviour. The classification is the expression of the judgment that precedes it and reveals the degree of adequacy of the referred in relation to the referent. The judgment involves qualitative and quantitative magnitudes. Assessment is a judgment of value since it is formulated from a norm (referent), with which the reality is assessed, but it does not express a certainty. Its validity is verified because it is forwarded to the referent[5].

Classification is an action included in the assessment process and "has a selective intention and proceeds to classify students by assigning them a position on a scale of values"[8]. The classification always results from the comparison (between elements of the group or of a student with a pre-established learning pattern). In the Portuguese system the comparison of students with pre-established standards prevails.

The classification reduces all the information that can be extracted from the evaluation to a numerical, literal or verbal symbol that only indicates its position in a scale of values. Nothing informs us on the causes of this position. Classification is preceded and justified by an assessment. There is no classification without assessment but there is assessment without classification. The assessment system does not depend on a classification system.

The classification is used to:

- Facilitate decisions to promote or retain students;
- Compare results between study cycles and institutions;
- Report pragmatically on its use

The classification is not used to:

- Inform about learning;
- Contribute to school success, because it is external to the learning process.

The distinction between assessment and classification presented appears explicitly when it considers that the assessment is "a descriptive and informative operation in the means that it employs, formative in the intention that presides over it and independent of the classification"[8].

As of the 1950s, Ralph Tyler was one of the first to propose a model to respond to dysfunctions in the practice of normative assessment dominated by measurement and introduced the concept of assessment as the operation through which it is possible to appreciate to what extent the curricular objectives are reached. Assessment would be the instrument

for measuring the congruence between the objectives reached by the students and the previously defined objectives. This concept introduces significant changes, among them the transformation of a concept understood between two elements, for a triad composed of the teacher, the student and the curricular objectives. This conception would involve stating the goals to be achieved in the training cycles, the prior definition of the curricular objectives, the definition of behavioural objectives and the creation of useful and reliable assessment tools[3,5]. Educational objectives are the benchmark through which, through assessment, one measures and tests, as rigorously as possible, how each student measures up. Assessment can be defined as "a judgment of value on the cognitive and behavioural aspects produced as a consequence of students' educational experiences and activities"[7]. Assessment reveals the differences between students in relation to a phenomenon or activity and in this sense the concept of cause (training) and effect (results of the assessment) persists. Three concepts that the author considers synonymous: Assessment of objectives, assessment of performance and assessment of results. Achieving an objective is a result or an achievement. These are the final products or acquisitions obtained after the planned activities have been completed. The assessment results relating to the objectives are classified as sufficient or insufficient. Regarding the student's personal work, the assessment is parameterized as satisfactory or unsatisfactory. The work may not be satisfactory, although the assessment of the objectives may be sufficient. The assessment provides the assessor with data from which the processes are analysed[7]. The evolution of the concepts makes the formative process the medium by which the assessment takes place and the retroaction effect is directed to all those involved, giving the opportunity for teachers and students to decide how to develop. The complexity of the assessment is accentuated and its purpose changes, "the assessment is no longer for judging or for testing, whatever it may be. It is for taking action and in this sense it is intimately linked to the decision process"[9]. The assessment will support decisions about the process and not only decisions on results expressed on qualitative or quantitative scales. In addition to supporting the decision-making process, "The assessment thus appears to be a largely configurative and articulating element of the educational practice as a whole"[4]. It configures why the students construct an image of their own competence according to the obtained results and articulates why the assessment shares itself among all the elements.

A third milestone in the evolution of the concept of assessment comes when it is defined as a professional judgment carried out by specialists[5,6]. For the authors, this conception takes on the ambiguity that results from the non-definition of the assessment. The professional judgment results from the processes of collecting and analysing information from which the decision is made. The reliability of data collected and its adequacy to educational processes is necessary for the decision making. The assessment is thus a decision that results from analysis processes[3].

As of the 90s, assessment is understood as a complex social interaction and the assessor is no longer considered as the element that makes a judgment but also one of the players in the pedagogical relationship interested in the consequences and meanings of the assessment process[6].

The pedagogical model emanated by the Bologna process places students in a role of building their own knowledge and the teacher ceases to be the transmitter and becomes the organizer of the contexts and a partner who accompanies them in their learning[6,10]. The learning assessment in the learning-centred pedagogical model, as defined in the Bologna Declaration, is supposed to be part of teaching and learning processes and have purposes that influence learning.

The approximately two decades of integration of nursing education in higher education have simultaneously accompanied the paradigm shift with the process of adaptation and integration. The general rules of the degree course leaves out the relations between assessment, teaching and learning and assign the purpose of the assessment to the classification with which the training is certified[1]. It is in the joint application with higher education diplomas that the curricula operate the concepts and define the roles of teacher and student.

The concept considered is anchored in the principles of constructivism by which it is considered that the assessment is a social construction, characterized by decision processes. Decisions are centred on the consequences, processes and meanings of the assessment. The purposes of the assessment organize their values and the assessors are active elements and participants in the processes. It is a complex social construction involving an *intentional relationship, action dynamics* and an *implicit value system to the dynamics of assessment*.

The intentional relationship presupposes effective communication in which the contents are adequate and understood by the receiver and also the affection conveyed in that communication. Context is also an element that influences the relationship.

The action dynamics include the assessment and should be considered from the point of view of adequacy, effectiveness and sense of action resulting from evaluative judgments.

The value system implicit in the assessment dynamics refers to the experiences and responses to rights and/or needs[6].

The assessment concepts demonstrate the increasing sense of complexity resulting from the sum of variables added to the initial understanding of assessment as a measure and the shift in focus from outcomes to processes and to meaning or action as a whole, then begin involving the products, processes, relationships and contexts.

The learning assessment takes on meaning when it is part of a pedagogical model that defines the relationship between teaching and learning. Processes and techniques are planned and structured according to the teaching and learning concepts. The purpose of the assessment is determined by the process and by the use of the results obtained.

ASSESSMENT RESULTS

At this point the *assessment results* concept is theorized. In the sphere of education sciences, the organizers are the pedagogical models described by the authors. The assessment is not considered an isolated element but is integrated in the pedagogical model and, in this way, has its own operations and meanings. This explanation seems pertinent since with the use of other sciences other organizers could be found.

The assessment results are considered at this point as the final product, that is, *what is assessed* is there to *deduce the learning results*.

The classic pedagogical model is characterized by the relationship hierarchized by knowledge, in which the teacher is assigned the status of absolute holder and the student the status of learner of this knowledge. The student assumes a passive and non-questioning performance and works towards listening, acceptance, memorization and imitation. The didactics are also structured around the demonstration of truth, of verbal exposition, of logical structuring, in a deductive perspective. The study programmes and curricula are built by closed disciplines. Based on this classic model, the assessment focuses on the cognitive domains that students have acquired over the course of the cycle. The assessment is normative, hierarchical, quantitative, summative and of the responsibility of the teacher. The emphasis is on the end product, that is, to what extent the knowledge and the degree of reproduction of the knowledge were acquired. The result of this evaluation is the control of the acquisition of knowledge whose information comes from test results and exams in a summative perspective, which reduces learning to the accumulation of transmitted knowledge[11,12]. The knowledge acquired by the students is demonstrated in moments planned for this and the verification of the results constitutes as assessment, the work demonstrated during the cycle does not provide data for the assessment.

The pedagogical model structured according to the objectives to be achieved at the end of a training cycle, favours learning with respect to teaching, and this should be controlled and measured by the general objectives of the curriculum and by the specific details of the units that compose it. The assessment is student-centred and allows the starting point to

be determined (diagnostic assessment) and progression is assessed according to planning that defines the goals staged throughout the cycle. What is assessed according to this model is the measure of achievement of the objectives. The objectives are normative, hierarchized using taxonomies of several domains and are expressed in performance and behaviour to be observed at the end of the cycle. The objectives are also the organizers of didactics, tools and activities for learning[11]. In this model the assessment results are the measures that verify the degree of accomplishment of the objectives, collected by the performance and behaviour demonstrated by the students. The collection of information is done through tests and standard situations in which the criteria are previously defined. Other aspects are not considered for assessment, other than those that are defined.

The structured model based on objectives can be organized to regulate teaching and learning processes. Organization and planning are built on the basis of the objectives but the assessment becomes a resource to ensure compliance with the same organization preventing deviations and marginal effects in the conduct of the processes. The assessment is regulated by the learning and teaching provided by the teachers. The results are analysed not for the purpose of proving or measuring but of identifying weaknesses that need to be corrected for learning purposes. The results are measured on the basis of the criteria expressed in the objectives. The change is made in the meaning and use of the assessment results. The assessment assumes a formative character that helps the decision making of the student and the teacher. Diagnostic assessment and summative assessment persist. The summative assessment is distinguished from the formative assessment because the first one is to classify, certify, select, occur in the final moments of the processes, be definitive and be carried out through final assessment instruments elaborated in a synthesis perspective. The formative assessment comprises a diagnostic function, accompanies the entire process, and the instruments used are prepared in order to provide data for understanding the processes of knowledge acquisition[11,13]. The results of the assessment are observable behaviours, learning is reduced to what is defined as objectives and the final product is student performance[6].

In the constructivist perspective of teaching and learning, training is part of a planning, similar to the models of a technical nature, but is developed in the belief of students' previous acquisitions, as fundamental elements for the construction of new knowledge. The teacher is given the ability to develop strategies that foster autonomy and favour cognitive processes. The context highlights the importance of stimulating environments that offer activities in which students find the starting point for new acquisitions. This model also contemplates the effect caused by the pairs. The construction of learning ceases to be a specific assignment for the student and the teacher to be an active and interactive

process of which the shared and participated decisions and the negotiations are a part. The assessment in this model is a process of self-regulation of the learning, accomplished by different instruments and the information that is collected by the non-standardized observation of the tasks and the realized activities. It is a formative assessment that is distinguished from formative assessment essentially because the assessment criteria and the assessment procedures are defined by the teacher and by the students, thus effecting the responsibility of both and the involvement. In the formative assessment the criteria and the activities are the responsibility of the teacher. This model and in particular the concept of assessment that underlies it, starts from some assumptions: The assessment has to take into account the diversity of the students and the different starting points of each one; learning does not only come from the students' spontaneous attitude through which favourable and stimulating environments will have to be created and learning assessment criteria are defined together, ensuring that everyone knows the aspects and dimensions that will be assessed. The sharing and interaction that characterize the model and the assessment, introduce the concepts of self-training, self-regulation and self-assessment[11]. Self-assessment can be interpreted as an exercise that the student makes in the sense of the teacher's expectations or as a reflective process in respect of achievement and autonomy. It is this interpretation of leading the student to active participation in the process that favours the acquisition of meaningful learning. By self-assessment, the student regulates and conducts his/her training in a dynamic and non-instrumented process[12]. The assessment perpetuates the purpose of classification, selection and certification, but also emphasizes the purpose of regulation throughout the formative process[6].

The results of the assessment are obtained following operations on the information collected during the training cycle. The theoretical assessment is made in the direction of the change of the referent that ceases to be the descriptive sum of the knowledge that constitutes a discipline to become a hierarchical list of objectives that designate capacities considered constitutive of the skills to be developed and for which each curricular unit contributes[14]. This evolution reflects the condition of coherence between the purpose and the processes. The processes are structured around actions and activities, supported by instruments of different natures that give them the meaning shaped by the pedagogical model. A static referent can induce standardized and rigid processes, which conflicts with the construction of process flexibility and customization. Referencing as a body of references that explain the design, planning and assessment of a training project is more globalizing, operational and flexible. Referencing, instead of referring, is the methodology by which the criteria for assessment that favours the formative assessment is identified[12,14].

The Charter of European Universities, signed on 18 September 1988, marks the beginning of the change of the pedagogical model in higher education. The Declarations and Conventions that followed included this level of education as a model for realizing the European Higher Education Area (EHEA). They are defined and accepted by the signatory countries in which Portugal is included, with extensive changes to the teaching and management model of higher education institutions including the organization of the teaching cycles given. The model of student-centred training, the curricular organization according to the learning skills and the syllabuses of curricular units are accepted, replacing the classical disciplines. The teacher is assigned the skills of pedagogical expertise and scientific expertise. These skills are necessary for achieving innovative teaching, with the use of learning didactics and technologies. The teacher is a guide in the students' work which is conducted in the sense of curricular and extracurricular skills[10,15]. The students' work is developed outside contact hours with teachers and is recognized and accounted for through the ECTS (European Credits Transfer System) system. The importance of learning environments is reinforced, including structures such as laboratories and libraries, in which students work for the acquisition of curricular skills and cross-curricular skills, which are considered essential to the concept of lifelong learning. The Dublin descriptors developed by the Join Quality Initiative Informal Group create the academic profiles on which the study plans are based. The academic profiles define the knowledge, skills, attitudes, and values that students must acquire in study cycles. The profiles are organized by categories that describe the skills[15]. The learning outcomes in higher education are the acquired skills[16].

In 2008, the European Commission approved the recommendations of the European Qualifications Framework (EQF) for implementation from 2010, with the new structure and organization of higher education in Europe entering into force. In this framework, the result of learning is defined as *"the statement of what a learner knows, understands and is able to do when a learning process is completed. The learning outcomes are specified in three categories: knowledge, skills and competence"*[17].The categories were also defined as:

"Aptitudes, the ability to apply knowledge and use acquired resources to complete tasks and solve problems.

Knowledge, the result of assimilation of information through learning. Knowledge is the collection of facts, principles, theories and practices related to an area of work or study.

Competence, the proven ability to use personal, social and/or methodological knowledge, skills and abilities, in professional situations or in study contexts, and for the purpose of professional and/or personal development[18].

In the same document two dimensions of the concept of "aptitudes" are identified, the cognitive ones with the descriptors related to logical, intuitive and creative thinking and the practical aptitudes described by manual dexterity, the use of methods, materials, tools and instruments. The knowledge is separated into theoretical and factual and the competences are described by the responsibility and autonomy demonstrated in professional, personal or training situations.

The definition of the set of competences to be developed in the study cycle originates from the exercise of the profession and has the practices of a competent professional as its starting point. They are qualitative statements for which criteria must be defined, from which competence is recognized. The criteria are separated into indicators that make it possible to gauge the degree of mastery of the criteria that compete for the skills to be acquired. Skills-based training is an elaborate and complex process that must ensure the coherence of the pedagogical purposes in which the assessment framework is integrated. The complexity of the real and the social transformations point to the need for the competency profile to be assessed and adjusted to the best solution in training[16].

Theoretically the assessment in the different pedagogical models results from a set of intentional actions whose focus shifted from students' performance to the processes that lead them to certain performances. The way in which students are considered in the assessment has also changed in the sense of valuing the contexts in which they are inserted and the stimuli that the environments provide for learning. The "time" to assess no longer has the exclusivity of the assessment activity to be the "time" of the training. Also, the possession of the criteria to assess left the aegis of the teacher for the sharing and negotiation between them and the students. In the structure of these changes are the pedagogical models determined by the meanings of teaching and learning because it is those meanings that guide the changes so that the process is coherent and integrated.

The results of the assessment, from which the learning is inferred, are no longer confined to the demonstration of the knowledge learned, but include the applications of this knowledge in the areas of defined skills. This evolution, also in the sense of complexity, leads us to look at "error". In a more traditional model, error was the demonstration of the knowledge not acquired, and in the constructivist conception error is an alert for reflection and adjustment of the learning process. Error ceased to belong to the student but also to the teacher, in the way they planned and operationalized the teaching.

In this synthesis of the great changes that have occurred in the concept of the assessment results, it is necessary to mention the aspects that have not changed, such as the operations that lead to the effectiveness of the assessment: information gathering, data analysis,

value judgments and decisions. These operations that are present in the assessment processes are also the responsibility of the students.

Assuming that competence is the adequacy of the action and that in order to act properly, a wealth of knowledge, skills and abilities is necessary, it is considered that the results *of the assessment* are the judgments elaborated on the criteria defined regarding the level of mastery to be achieved by the students. Its wording will focus on the knowledge, skills and abilities, which are demonstrable and measurable. "A learning outcome contains three main elements - verb/action word; description of learning; context of assessment - that characterize it as being what the student should be able to know and do at the end of a given learning course, and that they are susceptible of being measurable through the application of specific assessment criteria"[19]. The learning outcome represents the completion of a given training course but can also be considered a prerequisite that the student must have to pursue a study cycle or another training course. In higher education, learning outcomes allow comparability of systems and student mobility in the European higher education area.

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