An analysis of accreditation standards for undergraduate programs in Argentina

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Abstract

The evaluation of the quality of higher education is a key issue involving a diverse array of factors, a fact which necessitates a revision of the accreditation policies and systems already systematized and embedded in Argentina. Accreditation of undergraduate programs consists of recognizing that an academic program meets certain basic quality standards and criteria previously established. This research analyzes the makeup and creation of accreditation standards for Biochemistry programs in Argentina. The present research is exploratory, qualitative and quantitative, and it is of a descriptive-interpretative nature. A documentary analysis of the regulation that approves the accreditation standards for this program was carried out.The results demonstrate differences in the makeup of said standards in terms of the number of objects or components of evaluation and the number of variables associated with each one of these. As regards their creation, regulation standards comply with construct, measurement and formal requirements to a lesser extent than in their disaggregate form as objects and variables of evaluation.

Key words: Standards; accreditation; makeup; creation; undergraduate programs.

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1. Introduction

1.1. The issue of quality evaluation in higher education

The evaluation of the quality of higher education is a key issue involving political, social and economic factors, a fact which necessitates a revision of the accreditation policies and systems already systematized and embedded in Argentina (Corengia, Del Bello, Durand & Pita, 2013).

In the field of education, quality includes the evaluation and accreditation of an academic program, among other aspects. As such, quality can be defined as the recognition that an academic program receives in relation to basic standards and criteria previously established. Through the use of evaluation procedures, the education of professionals and the corresponding profiles desired at the university level will continue to improve in quality over time. Therefore, procedures for ensuring quality are mechanisms which guarantee that an institution, an academic program or the like fulfills the minimum markers established (Salas-Perea, 2000).

Though evaluation and accreditation are indeed related, they imply processes whose nature is inherently different. While evaluation processes are developed in order to better understand the functioning and results of academic programs, within the framework of objectives and internal contexts seeking the improvement of said programs, accreditation processes imply the establishment of criteria external to particular projects so as to compare them and issue qualifying judgements on them (Etcheverry, 2005).

Accreditation of a university program of study is the recognition awarded by either a governmental organization or a private organization recognized by the State, and carried out by experts in the field, which confirms that academic programs meet certain standards of academic quality. No matter the objective that the evaluation has, it must always rely on criteria and standards which are as clear and measurable as possible so that evaluators are able to issue value judgements that precisely confirm that a program or institution has met these standards (Villazon & De Pauw, 2009).

1.2. Quality standards

All accreditation procedures imply the creation and use of standards of quality, standards defined as constructions of reference or theoretical constructs established and agreed upon to allow for certainty in daily tasks and which seek to establish trust in a given evaluation system (Casassus, 1997).

The creation of standards must be an expression of a consensus that represents the idea of the quality of the object of evaluation and its variables. As such, procedures for the creation of standards are founded by committees of experts which include the participation of individuals or representatives of the institutions or programs to be evaluated and which understand evaluation procedures as mechanisms for continual improvement (Jornet, Perales & Paez, 2005).

The following criteria should be taken into account when creating these standards: that they are focused on key ideas, tending to be grouped into dimensions; that they are observable, that the presence or absence of fulfillment can be duly verified; that they form a whole related as a concept which makes sense for the evaluation in question; and that they preferably not be prescriptive so as to prevent the adoption of certain strategies over others. In addition, in order to be applied during the evaluation process, they must come together in a set of empirically observable variables that provide both qualitative and quantitative information through the use of markers (Avalos, 2008). A marker is a measure which is specific, explicit, objective and verifiable. From these markers come value judgements about the object in question. Nevertheless, though they do contribute to the quantitative referential framework, these markers imply a description of the qualitative components of said object. They are defined firstly as being a quantitative instrument, though they can be qualitative, both directly and indirectly (Abarca-Fernandez, 2009).

According to Almohalla (2012), we can identify three main dimensions into which the characteristics that must be considered when formulating markers can be grouped: the construct

characteristics, the measurement conditions and the formal conditions. The construct characteristics make reference to the relationship between the marker and the object to which it refers; the measurement requirements imply the existence of a predictive inference component, while the formal requirements have to do with the way in which the markers are expressed, so as to be utilized in the most operative way possible (Almohalla, 2012).

2. Methodology

The present research is exploratory, qualitative and quantitative, and is of a descriptive-interpretative nature, with its purpose being to analyze the makeup and creation of standards for the accreditation of undergraduate Biochemistry programs in Argentina. To this end, a documentary analysis (Porta & Silva, 2003) of the ministerial resolution approving the accreditation standards for this program was carried out. The sample was made up of forty three (43) accreditation standards put forth in Annex IV of Resolution MECyT 565/04, for the accreditation of Biochemistry programs. These standards are a set of parameters that establish criteria for quality in relation to five dimensions of analysis: Institutional Context, Program of Study, Academic Body, Students and Graduates, and Infrastructure and Equipment.

In the first phase, we carried out an analysis of the standards according to their makeup, describing the number and type of objects and variables of evaluation in each of the five aforementioned dimensions. Standards were classified as simple or compound according to the number of objects and variables of evaluation they included. For this classification, the following categories of analysis and coding were established: object of evaluation (oe); component object of evaluation (coe); nominal variable object of evaluation (voe-nv); nominal variable component object of evaluation (vcoe-nv); quantitative variable object of evaluation (voe-qv); quantitative variable component object of evaluation (vcoe-qv). After coding with the Atlas ti program, we proceeded to determine the total number of oe, coe, voe-nv and vcoe-nv that make up each of the standards.

During the second phase, the creation of the standards was analyzed. To do this, we differentiated standards according to how they were expressed in the regulations as a "group of aggregate standards" from those separated into each one of their objects and associated variables as a "group of disaggregate standards." We compared how each of these groups fulfilled the requirements for its creation in number and percentage. This comparison included an analysis of the construct requirements as dimensions and their markers: meaningfulness, relevance, teleologicity and utility; the measurement requirements: observation, applicability and coding; and the formal requirements: brevity and clarity (Almohalla, 2012).

3. Results

3.1. Analysis of the makeup of accreditation standards

Generally, we determined that in terms of their makeup, the standards may be classified as simple standards or compound standards, the former being those that include a single object of evaluation and related variable while the latter include more than one object of evaluation or different numbers of variables. As the majority of the standards were compound, we were able to disaggregate them into the following categories: object of evaluation (oe), component object of evaluation (coe), nominal variable object of evaluation (voe-nv), nominal variable component object of evaluation (vcoe-nv), quantitative variable object of evaluation (voe-qv) and quantitative variable component object of evaluation (vcoe-qv).

Using this information, the structure of each dimension of the standards was able to be determined as follows: the Institutional Context dimension had eleven standards which included nineteen oe, one coe, fifty voe-nv, four vcoe-nv and no voe-qv nor vcoe-qv; the Program of Study had eleven standards, ten oe, four coe, thirty six voe-nv, six vcoe-nv and no voe-qv nor vcoe-qv; the Academic Body had four standards, six oe, one coe, twenty one voe-nv, twenty vcoe-nv and no voe-qv nor vcoe-qv; the Students and Graduates had seven standards, four oe, twenty voe-nv and no voe-qv nor vcoe-qv; and

the Infrastructure and Equipment dimension had ten standards, fifteen oe, fifty three voe-nv and no voe-qv nor vcoe-qv.

Keeping in mind this data, we were able to identify differences in the number of standards expressed for each dimension. A similar disproportion was also observed in the makeup of each dimension's standards in terms of the number of objects of evaluation or component objects of evaluation and in terms of the number of variables associated with each one.

Additionally, we identified a lack of order of appearance of the standards' different objects and related variables. As such, certain objects of evaluation were evaluated in some dimensions, then in others and then were reevaluated in subsequent standards.

Another aspect to bear in mind is the fact that some standards made reference to general aspects for one dimension and to extremely particular aspects for others; as well as the existence of standards made up of variables only, without making reference to any explicit object of evaluation.

Regarding the variables, we observed similar characteristics in terms of the disparity that they sought to evaluate, the number of variables per object of evaluation and their level of specificity. Some were very general while others were very specific. We also observed that some objects of evaluation were associated with a single variable while others were associated with more than one, in some cases up to twenty variables were associated with a single object of evaluation.

Such disproportion generates inequality and a lack of uniformity in the system of undergraduate accreditation standards.

3.2. Analysis of the creation of accreditation standards

To carry out an analysis of the creation of the standards, we took into account those expressed in the regulations as a "group of aggregate standards" and those separated into each one of their objects and associated variables as a "group of disaggregate standards." We compared how each of these groups fulfilled the requirements for its creation in number and percentage, which involved analyzing the construct requirements, the measurement requirements and the formal requirements. We identified four groups (A, B, C and D) according to the percentages of requirements fulfilled.

In this way, we observed that of the forty three aggregate standards presented in the regulations, fifteen (35%) fulfilled between 60% and 100% of the total requirements (group A), fifteen fulfilled between 30% and 60% (group B), thirteen fulfilled between 0% and 30% (group C) and none belonged to group D, those that do not fulfill any of the creation requirements. The analysis of the disaggregate standards provided the following results: one hundred seventy (82%) fulfilled between 60% and 100% of the total requirements (group A), twenty eight (13%) fulfilled between 30% and 60% (group B), nine (4%) fulfilled between 0% and 30% (group C) and three (1%) were found in group D.

This analysis demonstrated that the standards as expressed in the regulations fulfilled the construct, measurement and formal requirements to a lesser degree than the group of disaggregate standards.

3.2.1. Construct requirements

We demonstrated that the majority of the standards as expressed in the regulations fulfilled the construct, measurement and formal requirements to a lesser degree than the disaggregate standards, a characteristic which alludes to the relationship between what the standard seeks to evaluate and the object to which it refers. Hence, it is a property that acts as a guide or adequate sign of a referent.

Specifically, it was determined that in terms of the construct requirements, when the standards remained just as they had been expressed in the resolution, they had a lesser degree of meaningfulness, relevance, teleologicity and utility than when they were separated into the objects and variables of evaluation to which they made reference.

3.2.2. Measurement requirements

Upon analyzing the measurement requirements, we observed that the data gathered by the standards was more observable and applicable when disaggregate than when expressed in the regulations. In addition, with respect to the coding characteristics, when disaggregate the standards showed a percentage of coding greater than when aggregate, a fact that implies that the object can best be evaluated by the standard able to better code its variables.

3.2.3. Formal requirements

An analysis of the degree of fulfillment of the formal requirements determined that the standards were more brief and precise, as well as direct and descriptive, when analyzed as disaggregates instead of as aggregates. The standards as expressed in the regulations were less precise, more extensive, less descriptive and more indirect and undefined than when they were analyzed as disaggregates.

4. Conclusions

The results of our research demonstrated, on the one hand, that in terms of the makeup of accreditation standards for Biochemistry programs, there were differences related to the number of standards that each dimension included and there was a disproportion in the number of objects and variables that made up each object. In addition, some standards made reference to general aspects and some to particular aspects.

Our analysis of the creation of the standards demonstrated that the standards as they are expressed in the regulations were less precise, more extensive, less descriptive and more indirect and undefined than when they were analyzed as disaggregates for each of their objects of evaluation and corresponding variables.

The analysis as a whole leads to the conclusion that the standards expressed as aggregates, as they are included in the regulations, fulfilled the construct requirements to a lesser degree, showing less meaningfulness, relevance, teleologicity and utility than when they were analyzed as disaggregates separated into the objects and variables of evaluation to which they made reference.

Likewise, this tendency was also observed with respect to the measurement requirements, as the aggregate standards generally did not fulfill them, unlike the disaggre. This determinant has to do with the component of a standard's predicative inference as it is the observable measure of that which is being evaluated.

Finally, the percentage of aggregate standards not fulfilling the formal conditions is also important and is related to the way a standard is expressed in order for it to be utilized in the most operative way possible.

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