CHANGES IMPLEMENTED IN DISTANCE EDUCATION UNDERGRADUATE PROGRAMS THROUGH SELF-EVALUATION

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Abstract

This study aims to discuss the changes implemented in the distance education undergraduate programs offered by Universidade Federal do Rio Grande (FURG) through self-evaluation. Qualitative and quantitative methods were used for data analysis. For the qualitative analysis, discursive textual analysis was used. It led to a reading of the demonstrations of students which assisted in understanding the phenomenon under investigation. For the quantitative analysis, descriptive statistics and principal components analysis were used. The former assisted in identifying the profile of students who answered the evaluation tool; the latter allowed reducing the data set and thus clearly identifying the key issues for respondents. The results of qualitative and quantitative analysis were integrated into the final interpretation of results, and both helped in building a body of information that enabled restructuring the distance education programs, as well as in planning future strategies.
Keywords: self-evaluation, distance education, implementation of changes.

1. Introduction

The recent growth of distance education is driven by the development of digital technologies and the challenge of educating a society that requires constant adaptation to the news and to the ability of learning and building new knowledge.

Distance education requires developing pedagogical strategies, investing in professional training (teachers, tutors, and support staff), and finding mechanisms that may qualify the education. It is essential to plan and implement systems for ongoing institutional evaluation in order to support improvements in the management and quality of education (Brazil, 2007). The process of evaluating contributes to continuous improvement through the awareness of limitations, potentials, and other actions involving changes and improvements.

Therefore, this study aims to present the changes implemented from the results of the self-evaluation of the undergraduate programs offered by FURG within the Open University of Brazil (UAB). The construction of the evaluative tool and the analysis methods are found throughout a paper presented in the *V Congresso Nacional de Ensino Superior a Distância* [National Congress of Distance Higher Education] (ESUD) by the title of *Avaliação Institucional de Cursos de Graduação na Modalidade a Distância* [Institutional Evaluation of Distance Education Undergraduate Programs] [1].

From the evaluation developed in that text, this study will characterize the profile of students, the methods used, and the results of quantitative and qualitative evaluation. Finally, proposals implemented in teaching and management will be given.

2. Methodology

The research instrument used in the evaluation was constructed from a literature review and adapted to the specificities of the distance education programs offered by FURG.

At the end of the first semester of the programs, students of the five poles attended by FURG (Figure 1) were asked to voluntarily answer an evaluative survey consisting of open and closed questions, which was available on the Moodle platform learning environment (at <http://www.uab.furg.br>).
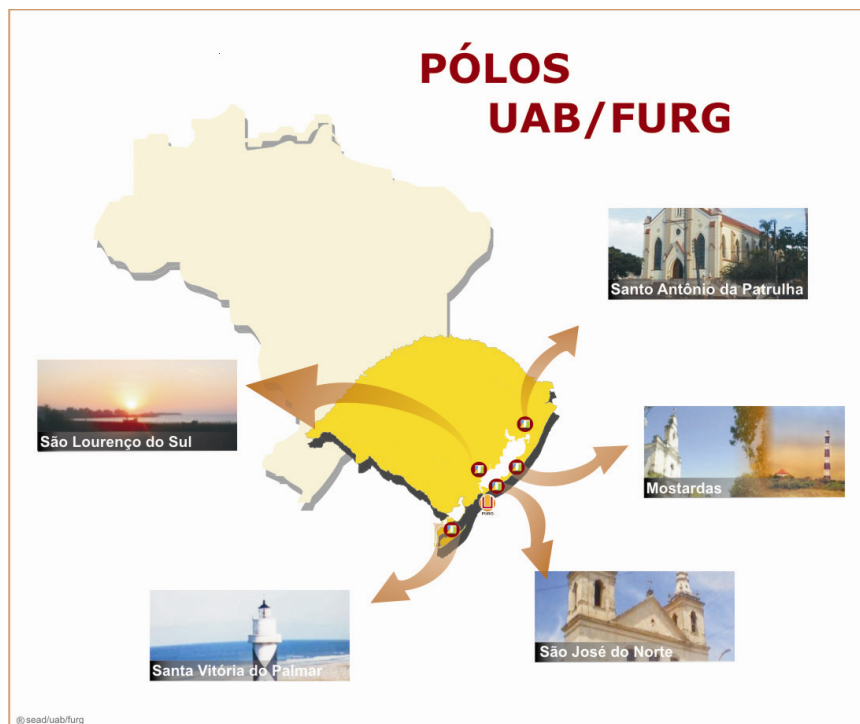

Figure 1 – Poles attended by UAB/FURG

Voluntarily, 31% of the students enrolled in Administration and Pedagogy courses answered the survey. In 26 closed questions, each respondent marked from zero (completely disagree) to ten (completely agree), according to their judgment of the statement on each issue. Of the three open questions, two aimed to identify the positive and negative aspects of the course, and the third one asked the student what would be proposed if he or she could change the course.

First, the evaluative instrument presented a brief explanation of its purpose, followed by a few questions on the profile of students. Next issues concerned the course organization and the pole structure.

In the data analysis, both qualitative and quantitative methods were used together, since they complement themselves and thus should be used. This prescript is supported by authors such as Demo (1991) and Dias Sobrinho (1997), who point out the contributions of the link between the qualitative and

quantitative methods in relation to a deeper understanding of the evaluated subject.

The data analysis of closed questions was performed by descriptive statistics and principal components analysis. On the one hand, descriptive statistics was used to identify the profile of students who answered the survey. On the other hand, principal component analysis (PCA) allowed identifying patterns or relationships relying among the various issues under evaluation, thus determining whether the information could be condensed or summarized into a smaller number of components. The percentage of variation that each component explained was observed in order to interpret data patterns. Nevertheless, it is important to emphasize that the understanding of principal components (PC) posses a degree of subjectivity, and therefore may vary from a researcher to another.

The analysis of open questions was performed by adapting the method of discursive textual analysis biased by Moraes and Galiazzi (2007). The method is proposed to make a rigorous and thorough reading of textual materials, aiming to describe and interpret them to achieve a more complex understanding of the phenomena and the discourses from which they were produced.

Textual analysis may be understood as a process self-organized by a cycle of three elements: the unitarization, which consists of the text disassembly; the categorization, where relations are built between the units, combining and classifying them; and the construction of a metatext, with the understanding built from a new combination of the previous cycles.

The results obtained in the data analysis helped to build a body of information that allowed the (re)planning and restructuring of the distance education programs offered by FURG.

3. Discussion of Results

Regarding the profile of students (Table 1), the following issues were proposed: conclusion of High School; employment; age; place of access to the Moodle platform; frequency of access to the platform; time to studies.

Issues about the profile of students	Porcentagem
High School concluded more 10 ago	40%
Employed	82%
30 years old or more	46%
Access the platform from home computer	61%
Access the platform from five to seven times a week	57%
10-20 hours per week devoted to studies	54%

Table 1 – Result from Profile of Students

Through PCA, the 26 variables (issues) could be reduced to 5 (five) PCs, which together explained 70.38% of total variation (TV) of the data set. According to Hair *et. al.* (1998), this is acceptable for researching in the humanities (Table 2). Thus, arithmetic ratio was used to verify the degree of satisfaction of students in each issue of the survey. While PC indicates the importance of the issues investigated, the ratio shows if they are being met.

Principal Component (PC)	TV*
PC1 - Operation of the Internet and the pole	16,83%
PC2 - Tutor presence	16,55%
PC3 - Discipline and course-student interaction	15%
PC4 - Coordinator and physical structure of the pole	13%
PC5 - Navigation and usability	9%

Table 2 – Results from the Principal Components Analysis
*TV – percentage of total variation of data as to PC

PC1 explained 16.83% of TV of the data set and is an underlying factor that can be interpreted as related to the operation of the Internet and the pole, and which may be seen as the most important factors for students. All questions in this component had arithmetic ratio higher than eight, indicating that the students are satisfied with the issues concerning that, which is important for them.

Related to tutor presence, PC2 shows almost the same variation as CP1. As a result, these two factors have almost the same importance to the students. Moreover, among the statements constituting PC3, related to the subjects and the student-course integration, the issues concerning the time devoted to studies and the distribution of subjects throughout the semester had the lowest ratio, indicating dissatisfaction of students, especially about the time devoted to each discipline.

Regarding the coordination and the physical structure of the pole, PC4 shows 6.8 ratio by issues on the amount of books available in the library, which indicates the dissatisfaction of students about this fact. PC5 explained 9% of TV of the data set and is associated with the navigation and usability. This result shows the low importance given to the navigation and usability of the virtual educational environment.

From the open questions, four categories were identified: physical structure and human resources of the pole; challenges of studying in the distance mode; face meetings; and interaction between the different actors involved in the distance education.

Based on these results and the evidence from open questions, the *Secretaria de Educação à Distância* [Office of Distance Education] (SEaD) of FURG implemented some focused actions, adapting them to the specificities of each program. The following section clarifies the changes already incorporated into the courses.

4. Implementations proposed from the analysis of results

Data analysis defined the most important factor for students as related to the operation of the Internet and the pole, since the program material is digital (video lessons, animations, sound, hypertext, etc) and course-student interaction occurs especially through the communicative tools available on the Moodle platform.

The poles' computer laboratories play a crucial role in the distance education programs, because most students use such infrastructure to monitor the course progress. According to the evaluation of students, the laboratories are well equipped with multimedia kit and speedy enough Internet to download and upload files. To ensure access to digital materials for classes, a multidisciplinary team of SEaD is responsible for previously testing all materials that will be available in class (videos, software, digital texts, etc) due to the multiple configurations and versions of programs. This work is performed by the team on the presence of the tutors of the five poles.

Furthermore, PC2 ratified the fact that the tutor presence plays vital role in the educational process. This component highlighted the importance of such an actor in distance education, who is a link between institution, teacher, and student (Gonzales, 2005). As a result, changes were implemented in the tutor and teacher continuous training program offered by SEaD/UAB. The program has strengthened the pedagogical link among teachers, distance tutors, and the presence ones. The benchmarks of quality established by the Brazilian Ministry of Education and Culture (MEC, 2007) recommend that presence tutors must know the pedagogical project of the program and the teaching materials in order to assist students in developing their individual and teamwork tasks, encouraging research, and clarifying questions in the use of the available technologies.

From the open questions it was evident the importance of coherence between the distance tutor activities and the discipline targets established by the teacher. Therefore, SEaD's pedagogical team has guided the teachers on the importance of holding weekly meetings of teachers and tutors. This allowed the coordination of actions and enabled an integrated collective work. Litwin (2001) alleged that if the tutor has the appropriate training, he or she is able to understand, improve, enrich and deepen the proposal offered by teaching materials. That is, such intervention may improve the pedagogical proposal by adding value to it.

Another point emphasized by students is related to the duration and distribution of subjects within the programs. On the duration of courses, students reported that six weeks for each subject were insufficient for the content development. Therefore, SEaD organized the semester in two modules, each with eight weeks, being the second module started only after the first one was concluded. The recovery of the subjects offered in two modules was then allocated to the end of the term.

Besides, the survey evidenced the need to improve the collection of books available in the poles' libraries. In partnership with the poles, SEaD has sought to make possible the purchase of materials needed for the operation of the programs. According to the benchmarks of quality for distance education established by MEC, the libraries of the poles must have an updated collection, which is comprehensive and consistent with the disciplines of the programs

offered. Only thus access to the information necessary for the development of activities proposed in education, research, and extension, is guaranteed.

In their demonstrations, the students also emphasized the need for more face meetings. PC5 confirms the little emphasis on navigation and usability, highlighting the strong linkage remaining between the students and the presence education. In an attempt to overcome the presence model and to assist in building the culture of distance education, SEaD has promoted meetings with students at the pole to guide them in the management of study schedules according to their realities and in the proper organization to perform the activities of the different disciplines.

5. Late referrals

The planning and management of distance education programs are complex and dynamic tasks, which require an understanding of the different dimensions involved in the process. Essentially, pedagogical aspects, human resources, and infrastructure are features that must be taken into consideration. Conducting the evaluation herein presented enabled the identification of potentials that were not exploited yet and the diagnosis of points that needed adjustments. So that helped to improve the management and teaching systems.

The result of the self-evaluation and the changes already implemented by SEaD/FURG on the basis of that work were disclosed at the poles through meetings with students, presence tutors, and coordinators. The meetings reveled that students were pleased to have their suggestions considered, especially on the (re)arrangement of the subjects within the semester and the adequacy of the platform interface. Moreover, it is worth mentioning that the transparency and dialogue maintained by FURG with these students were exalted during the meetings in the five poles of action.

In conclusion, this study highlighted the importance of the wide dissemination of the results of institutional evaluation and the possibility of active return to students so that the value of their participation is made clear.

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[1] Available at < http://200.169.53.89/download/CD%20congressos/2008/V%20ESUD/trabs/t38638.pdf>

Acknowledgement

References

BRASIL. Ministério da Educação e Cultura. **Referências de Qualidade para Educação a Distância**. Disponível em http://portal.mec.gov.br/seed/. Fevereiro, 2007.

DEMO, Pedro. **Avaliação Qualitativa**. 3ª ed. São Paulo: Cortez, 1991.

DIAS SOBRINHO, José. **Avaliação Quantitativa e Avaliação Qualitativa: Interações e Ênfases**. In: Avaliação Universitária em Questão: Reformas do Estado e da Educação Superior. Campinas: Autores Associados, 1997.

GONZÁLEZ, Mathias. **Fundamentos da tutoria em Educação a Distância**. São Paulo: Avercamp, 2005.

HAIR, J.F. et al. **Multivariate Data Analysis**. 5 th ed. New Jersey: Prentice Hall, 1998.

LITWIN, Edith. (Org.). **Educação a distância: temas para o debate de uma nova agenda educativa**. Tradução Fátima Murad. Porto Alegre: Artmed Editora, 2001.

MORAES, R. GALIAZZI, M. C. **Análise Textual Discursiva**. Ijuí: Ed. Unijuí, 2007.