History of Enade concepts of Dentistry courses in Bahia

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ABSTRACT
The National Exam of Students Performance (Enade) is an integral part of the National Higher Education Assessment System (Sinaes). Enade is held every three years by students completing undergraduate courses in order to measure student performance in relation to the course offered. The aim of this study was to describe the historical series of concepts in Enade of the Dentistry course of private and public Institutions of Higher Education (IES) in the state of Bahia, in 2004, 2007, 2010, 2013, 2016 and 2019 and to compare the concepts obtained by IES throughout this period. A retrospective descriptive observational research was carried out in public files available on the official website of the National Institute of Educational Studies and Research Anísio Teixeira (INEP) of all Enade concepts of Dentistry courses in the Unit of the Federation of Bahia. The data obtained were submitted to descriptive analysis by the mean and standard deviation of the concepts. Private institutions had an average score of 2.78 ± 0.72 in the period surveyed, with no difference in performance between them, with the exception of the Dentistry course of Bahia School of Medicine and Public Health (EBMSP), which attained scores 4 and 5, in 3 exams. Public institutions had an average score of 4.05 ± 0.83 in the concepts. The Federal University of Bahia (UFBA) obtained an average score of 4.33. Public IES obtained better results in the Enade concept than private IES. UFBA was evaluated as being the best IES of Dentistry in Bahia throughout the historical series considered. Descriptors: Education, Dental. Educational Assessment. Education, Higher.

1 INTRODUCTION
Since the mid-1990s, the discussion on educational assessment in Brazil has been of great relevance, especially since the creation of the National Course Exam (ENC), popularly known as “Provão”¹, which was applied in the period from 1996 to 2003 under the Law of Guidelines and Bases of National Education – Law No. 9,394 of December 20, 1996². Subsequently, by Law No. 10,861 of April 14, 2004, the National System of Assessment in Higher Education (Sinaes) was established, which consists of three main components: the assessment of institutions, courses and students’ performance³. The set of assessments of which Sinaes are composed, are externally coordinated and organized by the National Commission for
Assessment of Higher Education (Conaes). With regard to operationalization, this is the responsibility of the National Institute of Educational Studies and Research Anísio Teixeira (INEP), which develops the assessments that have been attributed to it.

The National Student Performance Examination (Enade) is an integral part of Sinaes, and is carried out by students completing undergraduate courses, in order to measure the performance of students in relation to the syllabus provided in the curricular bases of the courses, as well as their skills and competences to comprehensively understand topics specifically related to their profession.

Dental practice demands academic training that promotes the formation of qualified professionals, whose skills and competences allow their performance in the market in an ethical, judicious and responsible manner, making correct diagnoses and ensuring patient’s health and well-being, by adapting to the constant technical, social, cultural and economic changes in their environment.

Enade is one of the three evaluation axes of Sinaes with the aim of generating and organizing educational reforms in higher education in Brazil. The specific content of Dentistry in Enade has been extensively studied, with emphasis on student performance in Community Health issues. Despite the relevance of assessing a historical series of concepts of Enade undergraduate courses in Dentistry, few studies using this design were found. A previous study assessed a historical series of Enade concepts of undergraduate courses in Dentistry of public and private Institutions of Higher Education (IES) in Brazil in the years 2007, 2010, 2013, 2016 and 2019 and compare the values of the concepts obtained by public and private IESs in the state of Bahia, over time.

2 METHOD
Synthesis of methodological choices
From an epistemological point of view, the design of the research was based on post-positivist foundations in a quantitative investigative approach that allowed multidimensional procedures for the purposes of collection and description of data, since the aim of the research was to be descriptive.

It started with an exploratory research for the delimitation of the IESs that would participate in the sample universe of this study, limited in time (from 2004 to 2019) and in space to the IESs in the State of Bahia, which offered a Dentistry course. This research consisted of a longitudinal survey merged with electronic research in a public database (INEP) to support a multiple case study that would contemplate the external evaluation of education.

Systematic observation was used as an instrument for obtaining the data, for which the parameters and variables were pre-defined in an electronic spreadsheet in the form of a checklist. The analytical interpretation of the material collected was performed using simple and descriptive statistics that allowed to improve its application and issues, and to improve management of the teaching of Dentistry, in addition, an updated and individualized analysis of a Brazilian state introduces the particularities of the state of Bahia into the discussion to point them out for the purpose of making improvements.
comparisons and inferences.

**Theoretical-analytical foundations and space-time delimitation**

Support and guidance for this investigation was sought in the study by Azevedo *et al.* (2017) which had a time frame within the years 2007, 2010 and 2013 and initially presented the data categorized according to the Federation Unity (UF), and later grouped into the macro-regions, according to the administrative category.

This is a retrospective descriptive observational research in public archives on the official website of INEP. A documentary survey of all Enade editions was carried out relative to the Dentistry course in the state of Bahia, in the years 2004, 2007, 2010, 2013, 2016 and 2019. The survey was carried out from August to November 2020, by a single researcher.

Data was collected from the electronic mail addresses [https://www.gov.br/inep/pt-br/areas-de-atuacao/avaliacao-e-exames-educacionais/enade/resultados](https://www.gov.br/inep/pt-br/areas-de-atuacao/avaliacao-e-exames-educacionais/enade/resultados) in the selectable item <Conceito Enade>, opening a virtual page that leads to another virtual page of <Indicadores de Qualidade da Educação Superior>, with every year in which evaluations were made of all courses in all areas of knowledge. Each year is a selectable item in which an Excel® file with data about the courses and IESs evaluated may be obtained.

The Excel® files obtained did not contain exactly the same information, such as for example, the number of vacancies per course, number of professors (masters and doctors), freshman student participants, private category with profit or nonprofit organizations, however, all of the six were Excel® files contained information about the administrative category (public or private) and the Enade concepts (1, 2, 3, 4 or 5). Therefore, all files had these two categories of information in common and were included in an Excel® spreadsheet for analysis.

The study was conducted with 13 IESs, 10 private and three public. In 2004, the participants were three private and two public HEIs; in 2007, 2010 and 2013 three private and three public IESs; in 2016 the participation of private IESs rose to seven and the three public IESs continued with their participation. In 2019, the last year of the analysis, 10 private and three public IESs participated.

**Inclusion and Exclusion Criteria**

A criterion for inclusion in the research was that the institution with a Dentistry course would need to have participated in at least one edition of Enade, with data obtained from the official website of INEP, and informed in the document in Excel®. Therefore, of the total of 28 Dentistry courses in operation in the state of Bahia at the time of data collection, only five did not participate in at least one edition of Enade.

Please note that to enable calculation of the Enade concept, it was necessary for at least two graduating students to have attended the test and obtained valid results for the purposes of evaluation. Courses with only one student present were registered as “Without Concept (SC)” to preserve the student's identity.

**Statistical analysis**

Data were subjected to descriptive analysis by means of the mean and standard deviation of the concepts, and linear analysis with the category "concept x time". The numerical values of the concepts, which are integers between one and five, collected per institution, per year, were compared on a temporal evolutionary scale.

**Ethical Considerations**

As this was research conducted with the use of secondary data obtained from Public datasets, without exposure of data that would
identify the subject either partly or fully, this dispensed with the requirement of evaluation by the Research Ethics Committee.

3 RESULTS

Private institutions obtained an average score of 2.78±0.72 in the period studied, without much difference in performance between them, with the exception of the Bahia School of Medicine and Public Health (EBMSP), which obtained a mean score of 3.67±0.75. Public universities had a mean score of 4.05±0.83 of the concepts.

The Federal University of Bahia (UFBA) has the best score on average (4.33±0.75) and had a maximum score in half of the evaluations in which UFBA participated. The years in which the IESs showed better performance were 2004 and 2013. In 2010, with the exception of the State University of Southwest Bahia (UESB) and the University Center for Technology and Science, Salvador (UNIFTC SA), the other IES showed performance below their average performance (table 1).

### Table 1. Enade Concept of the researched IES

<table>
<thead>
<tr>
<th>IES</th>
<th>Administrative category</th>
<th>Enade Concept</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESUPI</td>
<td>Private</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>EBMSP</td>
<td>Private</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>FACDELTA</td>
<td>Private</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>FAINOR</td>
<td>Private</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>FAMAM</td>
<td>Private</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>UNIAGES</td>
<td>Private</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>UNIFAS</td>
<td>Private</td>
<td>SC</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>UNIFTC SA</td>
<td>Private</td>
<td>SC</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>UNIRB</td>
<td>Private</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>UniRuy Wyden</td>
<td>Private</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>UEFS</td>
<td>Public</td>
<td>5</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>UESB</td>
<td>Public</td>
<td>-</td>
<td>SC</td>
<td>4</td>
</tr>
</tbody>
</table>

In 2004, EBMSP was the only private IES to participate in the Enade, and attained the maximum score, however, there was a fall in performance in subsequent years (2010 to 2016), with recovery of the score in the 2019 exam, in which it attained Concept 4. This justified a higher standard deviation from the mean (0.73) among private IES (table 1). Furthermore, the EBMSP was the private institution that showed the largest fall in performance among private IES over the years (graph 1).

In 2004, UNIFTC SA and the University Center for Agrarian Sciences and Health (UNIFAS) were left without a concept (SC) due...
to lack of participants (table 1). The concept of UNIFAS has varied over the years, with the lowest score being attained in 2010 with Concept 2, and the highest score, in 2013 with Concept 4. In 2007, UNIFTC SA attained Concept 2, and there was positive evolution, so that it maintained Concept 3 in the following three evaluations. In 2019, however, there was a fall in performance shown by the attainment of Concept 2 (graph 1).

Faculdade Delta (FACDELTA), Faculdade Independente do Nordeste (FAINOR), Faculdade Maria Milza (FAMAM) and Centro Universitário Regional da Bahia (UNIRB) participated in the Enade evaluation in 2016 and 2019. In both participations, FACDELTA and FAMAM obtained Concept 3 in Enade. FAINOR obtained Concept 3 in 2016 and showed a fall in performance in the year 2019, obtained Concept 2. UNIRB maintained Concept 2 in the two years of participation (graph 1).

The State University of Feira de Santana (UEFS) achieved the maximum score in 2004. In the following two evaluations, there was a successive fall in performance, shown by attaining Concept 4 in 2007 and Concept 2 in 2010. In 2013, 2016 and 2019, the university maintained Concept 3 (graph 2).

Between the evaluations performed in years 2010 and 2019, the State University of Southwest Bahia (UESB) obtained its best result in 2013 when it attained the highest Concept score. In 2004 and 2013, UFBA attained the maximum Concept score and showed a fall in performance in the other years, shown by attaining Concept 4 in 2007, 3 in 2010 and 4 in 2016 (graph 2).

4 DISCUSSION
Enade made it possible to generate and organize educational adjustment in higher education in Brazil, based on analysis of the performance of students who take the exam. The student's questionnaire has enabled assessment of the teaching component, such as,
for example, the IES infrastructure, the quality of the faculty and professional experiences; and of
the non-teaching component, generally related to
the students’ lives, such as behavioral and sociodemographic issues.25

The title of professors of the IES could interfere in the quantity and quality of scientific production. A majority of professors with master’s and doctor’s degrees was a more common reality in public institutions.11 The Law No. 9,394 of December 20, 1996 does not determine a minimum limit of masters or doctors on the faculty staff of private education institutions, the requirement is that all members must have at least one Latu Senso title2.

The state of Bahia has 10 private IES and three public IES that offer a Course in Dentistry, which participated in at least one evaluation cycle of Enade. The mean score of Enade concepts for private IES was 2.78 and for public IES, it was 4.05. The administrative category is only one of the factors capable of influencing Enade results. Other factors could lead to this result, such as the need for reflection on the quality of teaching and learning7, teacher qualification (title and pedagogical training), investment in infrastructure and expansion of the number of exclusively dedicated professors,11,26 students who have higher economic levels, families in which the parents have higher education, public IESs with fewer students per class and a larger number of students present at the test.11

The exam may not fully represent the students’ ability from a technical/professional point of view, perhaps because the concepts are not sufficiently representative in relation to the performance and learning of the alumni themselves,25 moreover, the fact that the students’ family, social, economic and cultural context are equally important in the score obtained by the student in an assessment. The results of this study showed that the public IES achieved better concepts. Similar results have been found in previous studies. They would not have been better institutions based on the concept alone, other factors would have to be analyzed to affirm the primacy of these institutions, including factors that have been pointed out as being unsatisfactory in Enade, such as “masking” of the results, since there would be time intervals of preparation that preceded the tests and the possibility of tests being boycotted by students, which would interfere in the final grades.28

Undergraduate courses that demand a higher level of theoretical knowledge can be more easily assessed by means of tests such as Enade. In contrast, for professions that demand practical skills and techniques, such as Dentistry, the exam fails to capture the true essence of the learning acquired by students during the course. Thus, the results of the Enade concepts must be analyzed in light of the possible problems and limits inherent to the evaluation process.29

Sinaes evaluates institutions, courses and student performance. Enade, which forms part of Sinaes, is carried out by students who answer questions regarding competences, knowledge, curriculum content and training in general. The questionnaire answered by both students and the IES generates responses that are used to assess the pedagogical components of the course and the physical structure of the university. These questionnaires must be taken into account for planning and permanent assessments, as they are fundamental to the development of a systematic view of academic training, seeking approximation and interaction among different areas of knowledge, projects, actors and social segments.

Those responsible for higher education courses in Dentistry must make a careful and thoughtful assessment in order to promote
changes, when necessary, with the aim of achieving constant improvement and full development of the students’ potential. Moreover, their abilities must be explored, so that they will acquire professional skills that will lead them to work in the job market with excellence.28,29

The emphasis of the present study was on the state of Bahia, it individualized the IESs that offer the Dentistry course and those that participated in at least one edition of Enade. This type of research is not commonly conducted since immersion in a single state could lead to the impression that the reality of the state studied was disconnected from a historical, temporal and social context. Therefore, the authors emphasize that the particularities of the state of Bahia was discussed with the aim of pointing out the improvements that were made. Furthermore, the attempt to convert numbers into qualities was an inherent weakness of this study.

5 CONCLUSION

The Dentistry courses of public IESs obtained better scores in Enade when compared with those of private IESs throughout the historical series of the assessment, this conclusion draws attention to the organizational differences between the institutions, and emphasizes the qualification and career plan of the professors.

EBMSP was the only private IES that attained Concept 5. UFBA attained the maximum score in half of the evaluations in which it participated and was the IES in the state of Bahia that achieved the highest rating in the historical series of Enade. This showed evidence that the academic performance in Enade was influenced by characteristics of the administrative category and the time of presence of the Dentistry course at the IES. Thus, the construction of a course and the experience with the training of professionals require time.

The private IES EBMSP participated in all editions of Enade, while it was only in the first year of the historical series that UNIFAS and UNIFTC SA did not obtain a grade. This allowed a better comparison between these three private IES, with EBMSP obtaining the best mean rating of concepts, followed by UNIFAS and UNIFTC SA. The other private IES have recently offered Dentistry courses and have participated in one or two editions. In the group of three public IES, the best mean rating of concepts was obtained by UFBA, followed by UESB and UEFS. Thus UFBA and UEFS participated in all editions and UESB in four.

Future studies must be conducted with the addition of other variables for comparison such as socioeconomic group, parents’ education, number of students in the classroom, among other factors, in order to expand parameters that contribute to the improvement of teaching and public policies for the evaluation of higher education.

RESUMO

Histórico de conceitos do Enade dos cursos de Odontologia da Bahia

Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (INEP) de todos os conceitos Enade dos cursos de Odontologia na unidade baiana da federação. Os dados obtidos foram submetidos à análise descritiva por meio da média e desvio-padrão dos conceitos. As instituições particulares obtiveram média dos conceitos de 4,05±0,83. A Universidade Federal da Bahia (UFBA) obteve média de 4,33. As IES públicas obtiveram melhor resultado em conceito do Enade em relação ao das IES particulares. A UFBA foi a IES baiana de Odontologia mais bem avaliada ao longo da série histórica considerada.

**Descritores:** Educação em Odontologia. Avaliação Educacional. Educação Superior

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