

A relação entre as avaliações institucionais e o banco nacional de itens

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Resumo

Este artigo discute a produção de itens para o Banco Nacional de Itens (BNI) do Exame Nacional de Desempenho de Estudantes (Enade) da edição de 2017 e de 2020. O objetivo foi analisar a produção de itens para a prova deste exame, além de realizar comparações dessa produção de itens entre as duas últimas edições de um mesmo ciclo do Enade. Para tal, foi utilizada uma metodologia com abordagem qualitativo-quantitativa, associada a um referencial teórico e documental. Além disso, foi realizada uma busca nas bases de dados do Instituto Nacional de Estudos e Pesquisas Educacionais (Inep) no que se refere a esse tema. Os resultados apontaram Eficiências positivas para todos os cursos avaliados, tanto na edição do Enade de 2017 quanto para a edição de 2020. Apontaram também que no biênio 2020-2021, além do momento pandêmico, as interferências políticas no âmbito do Ministério da Educação (MEC) e no Inep, têm contribuído para dificuldades na conclusão do processo de avaliação dos itens produzidos.

Palavras-chave: Avaliação institucional. Educação superior. Banco nacional de item. Políticas educacionais. Enade.

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The Relationship between Institutional Assessments and the National Item Bank

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Abstract

This paper discusses the production of items for the National Bank of Items (BNI) of the National Student Performance Exam (Enade) for the 2017 and 2020 editions. The aim was to analyze the production of items for the test of this exam, as well as to make comparisons of this production of items between the last two editions of the same Enade cycle. To this end, a qualitative-quantitative methodology was used, associated with a theoretical and documental reference. Moreover, a search was conducted in the databases of the National Institute of Educational Studies and Research (Inep) regarding this theme. The results showed positive efficiencies for all the courses evaluated, both for the 2017 edition of the Enade and for the 2020 edition. They also pointed out that in the 2020-2021 biennium, in addition to the pandemic moment, political interference in the Ministry of Education (MEC) and in Inep, have contributed to difficulties in completing the evaluation process of the items produced.

Keywords: Institutional Assessment. Higher Education. National Item Bank. Educational Policies. Enade.

La relación entre las evaluaciones institucionales y el banco nacional de elementos

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Resumen

Este artículo analiza la producción de ítems para el Banco Nacional de Ítems (BNI) del Examen Nacional de Rendimiento Estudiantil (Enade) para las ediciones de 2017 y 2020. El objetivo era analizar la producción de ítems para la prueba de este examen, así como realizar comparaciones de esta producción de ítems entre las dos últimas ediciones del mismo ciclo de Enade. Para ello, se recurrió a una metodología con enfoque cualitativo-cuantitativo, asociada a un referencial teórico y documental. Además, se realizó una búsqueda en las bases de datos del Instituto Nacional de Estudios e Investigaciones Educativas (Inep) sobre este tema. Los resultados indicaron eficiencias positivas para todos los cursos evaluados, tanto en la edición 2017 de Enade como para la edición 2020. También señalaron que en el bienio 2020-2021, además del momento pandémico, las interferencias políticas dentro del Ministerio de Educación (MEC) y el Inep, han contribuido a las dificultades para completar el proceso de evaluación de los ítems producidos.

Palabras clave: Evaluación institucional. Educación Superior. Banco Nacional de Artículos. Políticas Educativas. Enade.

Introduction

The National Institute for Educational Studies and Research – Anísio Teixeira (Inep) is the body responsible for managing the entire educational assessment process. Since the educational assessment process covers various education systems across the country, these assessments are conducted on a large scale. The large-scale assessment model necessitates the creation of an item bank. For this reason, Inep was tasked with creating the National Item Bank (BNI), which allows for the development of high-quality items for the various assessments managed by Inep. These items are crafted and reviewed for each assessment tool. As noted, the BNI is an essential instrument for producing and storing high-quality items, leading to the development of large-scale assessments.

Given Brazil's size and its multiple education systems, the existence of large-scale assessments would likely be improbable without the creation of this bank. In this context, institutional assessments and exams like the National High School Exam (Enem) and the National Student Performance Exam (Enade) would be compromised without the presence of the BNI. This study focuses on higher education and, therefore, emphasizes the BNI-Enade, i.e., the National Item Bank for higher education.

For the inclusion of items in the BNI-Enade, Inep invites the academic community to participate in this demanding task through public calls. As a result, faculty members contribute to building a network of collaborators for item construction and review. This BNI Collaborators Bank is activated for each assessment or exam under development (INEP, 2022a). These collaborators must be faculty members from Higher Education Institutions (IES) and have been actively teaching or have taught in the undergraduate course for which they intend to develop or review items within the last 18 months (INEP, 2022a).

In the context of educational policies regarding the current evaluation of higher education quality, faculty participation in this assessment process provides the triad of legitimacy, plurality, and transparency (INEP, 2016b). Legitimacy is represented by the involvement of the academic community. Since this participation occurs through a public call, faculty members engage in a plural and transparent environment, thus legitimizing the process. In higher education, the BNI stores technically quality items that allow for more accurate assessments of student proficiency. This proficiency refers to the content, skills, and competencies outlined in the National Curriculum Guidelines (DCNs) for undergraduate courses or in the guidelines of the National Catalogue of Higher Technology Courses (INEP, 2016a).

Law No. 10,861 of April 14, 2004, which established the National System for the Evaluation of Higher Education (Sinaes), in the first paragraph of Article 5, defines the connection between Enade and Sinaes (BRASIL, 2004). Enade aims to assess students' academic trajectories in relation to what is required by the DCNs for their formation.

Enade consists of four evaluative instruments: the exam, the student questionnaire, the exam perception questionnaire, and the course coordinator questionnaire (INEP, 2019). These evaluative instruments support policies for improving the quality assessment of higher education. The Enade exam and the BNI-Enade are instruments of the higher education assessment guidelines and are stipulated in the Sinaes creation law.

This study seeks to understand and possibly answer questions such as: What pedagogical measures have been taken by the General Coordination of Enade (Cgenade) at Inep to enable item developers and reviewers to provide better results for the BNI-Enade? Has the efficiency of the BNI-Enade in the knowledge areas evolved from one cycle to the next?

For this study, the utilization of items for the BNI-Enade is not synonymous with the efficiency of items produced for this bank. The efficiency of the BNI is defined as: the result of the ratio between the number of items inserted into the BNI-Enade for each course or area in a given edition of Enade and the number of items developed for each course or area. Based on this definition, the following equation was used to calculate efficiency: $E_f = \frac{I_a - I_p}{I_e}$, where: “ E_f ” represents Efficiency;; “ I_a ” is the number of accepted (approved) items; “ I_p ” is the number of items selected for the exam; and; “ I_e ” is the number of items developed. This is an ideal scenario. However, it is possible that, among the approved (accepted) items, it may not be feasible to select the required 30 items for the exam or, in the case of General Formation, to select 10 exam items. It is precisely for these situations that the existence of items in the BNI-Enade is justified—namely, to complete the number of items needed for an exam and, in more extreme cases, to create an exam.

Through the number of items not accepted during the item development and review processes for the BNI-Enade, it is evident that there is a significant number of faculty members participating in item development workshops who struggle to create items meeting the standards required by this item bank. This issue can be measured by the results of the BNI replenishments in recent years. Although the efficiency for most knowledge areas has shown positive results, there are certain areas with alarming numbers of discarded items (BRASIL, 2021).

Therefore, attention must be paid to this issue in order to identify alternatives for improving the processes of item production and review for the BNI-Enade. This will lead to positive results in the

The Relationship between Institutional Assessments and the National Item Bank effectiveness of the items produced for this bank and thus enhance the BNI-Enade. Monitoring the evolution and replenishment of the BNI is crucial for the survival of institutional assessments. In this study, the comparison is made between the most recent edition and the 2017 edition, as they are part of the same Enade cycle.

For this study, the discussions focused on analyzing the item production processes and their effective use in large-scale assessments or for composing this national bank, examining the real situation of institutional assessments in the country, and evaluating the structure and validity of the information available about these interventions. The central objective of this study was to analyze the production of items for the exam and compare this production between the last two editions of the same Enade cycle. To achieve this, a qualitative-quantitative methodology was used in association with theoretical and documentary references. Additionally, data and information provided by Inep were reviewed.

For the presentation of this study, the article is structured into 5 (five) sections in addition to this introduction. Section 2 (two) outlines the methodological procedures. Section 3 (three) presents the regulatory and regulatory framework of evaluations. Section 4 (four) describes the dynamics used for the National Item Bank (BNI), which is a conditional instrument in the development of large-scale assessments and necessary for the quality process in education assessment instrumentation. Section 5 (five) presents the analysis of results to aid in the production of high-quality items for large-scale assessments. Section 6 (six) provides the final considerations, summarizing the study.

Methodological Procedures

The study was developed using a propositional methodology with a quantitative-qualitative approach, incorporating bibliographic and documentary procedures. These methods are guided by theories of social representations, which are expressed and manifested through symbols where actors articulate their words and gestures. Oliveira, Santos, and Shimizu (2019, p. 477), citing Minayo (2008), remind us that: “social representations can also be defined as messages mediated by language, socially constructed, and necessarily anchored in the context of the individual who emits them.” It is important to note that for this study, a longitudinal and retrospective study method was adopted. This method was well defined and delineated by Teles and Coelho (2011)).

The data collected are secondary and correspond to integer values related to the number of items in the BNI-Enade from Inep. The data used in this study originated from Inep's 2018 Management Report (INEP, 2018), provided via Inep's Ombudsman, with protocol number 2344800275942/2019-64 dated 26/11/2019 on the portal of the General Comptroller of the Union (CGU). The request was

made through e-SIC under the category of Government and Policy, subcategory of Public Administration, and the response was provided on 17/12/2019 (BRASIL, 2021; INEP, 2021). Additional data used in this study were provided by Inep's Ombudsman, with protocol number 23546.005426/2022-10, accessed through the portal fala.br (BRASIL, 2022).

Data Exploration and Search in Databases

The bibliographic and documentary studies were guided by a chronological order to standardize the sequence and logic in describing and narrating the methods employed.

The bibliographic search was completed in March 2022. Four databases were selected and used to identify relevant works: Scientific Electronic Library Online (SciELO), the CAPES journal portal, Elsevier (Science Direct), and the Education Resources Information Center (ERIC). The search and selection of articles from these databases allowed for a review of recent, historical, specific, and multidisciplinary works. In addition to these four databases, the Digital Theses and Dissertations Bank of the Brazilian Institute for Information in Science and Technology (IBICT) was also consulted.

The keywords included a combination of terms such as: institutional assessments, national bank of items, educational data, Enade, and educational policies in Portuguese. For English-language databases, the terms used were: "institutional assessment", "national bank of items", "educational data", "Enade", and "educational policies". For Spanish-language databases, the terms included: "evaluaciones institucionales", "banco nacional de artículos", "datos educativos", "políticas educativas", and "Enade". The search process occurred in two phases to ensure a high degree of quality. The first phase aimed to identify only journal articles published in these databases. The second phase focused on identifying books, book chapters, as well as dissertations and theses.

Eligibility Criteria and Logic

The following Chart1 outlines the criteria adopted and the analyses conducted for the selection of articles and other works that could contribute to this study.

The Relationship between Institutional Assessments and the National Item Bank
Chart 1 – Eligibility Criteria for References

CRITERIA - FOCUS		
Assessment/Variable	Population of Interest	Language
Large-scale assessment	Political interventions	Portuguese
External evaluation	Groups of permanent staff at Inep	
Institutional assessments	Groups of public servants linked to the Ministry of Education (MEC)	Spanish
National Bank of Items	Item creators and reviewers for the BNI-Enade	English
Educational data		
National Student Performance Exam (Enade)		

Source: Prepared by the authors (2022).

Studies were excluded from the analysis if they focused on topics unrelated to the BNI-Enade evaluation processes and were outside the scope of this study, i.e., published more than 10 years ago. Also excluded were studies that made only superficial references to the topics discussed in this study, those that addressed only specific assessments, or those that discussed evaluation without any specific reference to formal education, as well as those that did not explicitly or implicitly target the theme or subject related to this study.

Screening and Selection

Table 1 provides an overview of the screening and selection process.

Table 1 - Selected References for the Research

SCREENING AND SELECTION OF REFERENCES				
Database	Institutional Assessments	Educational Data	Educational Policy Interventions	Total Works
<i>Scielo</i>	36	14	5	55
CAPES journals	37	10	7	54
<i>Science Direct</i>	26	12	8	46
Eric	30	14	10	54
Total	129	50	30	209

Source: Prepared by the authors (2022).

The bibliographic study was conducted between July 2021 and March 2022, while the documental research and data collection occurred from August 2018 to March 2022. A total of 209 articles were identified for title screening. A database was created for all 209 studies, including abstracts and bibliographic information. Titles and abstracts of each article were checked against the inclusion/exclusion criteria. After this step, 35 studies were analyzed for inclusion/exclusion criteria, and since they met the criteria, they were selected for full-text review.

After reviewing the full texts, 174 studies were excluded based on inclusion/exclusion criteria and access to full texts. Finally, 14 articles were selected for thematic analysis; however, only 3 of these were included in the references as they were cited in the study. Additionally, summaries and

titles of 2 books, 1 dissertation, and 1 thesis were included in the final review but were not part of the references, as they were not cited in the text of this study.

Furthermore, virtual libraries and higher education institutions (IES) were consulted, including internal sources of official government documents available on portals and sites such as mec.gov and inep.gov. External sources included international organizations like the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2015). Based on this strategy, 4 articles and 2 reports were included in the final thematic analysis but were not part of the references for the same reasons mentioned earlier.

Reliability

To avoid conflicts in the process of selecting works for this study, as well as during the analysis phase, emphasis was placed on search terms, codes, and methods that facilitated sharing with peer reviewers who are specialists in conducting literature-based research and managing academic literature. Through discussions and correspondence with peers, it was possible to estimate the reliability of the critically reviewed works in this study.

Regulatory Framework of Institutional Evaluations

According to Peixoto and Pinto (2021), consultations with official federal government agencies related to higher education evaluation processes reveal a considerable number of documents published since 2000. These documents include laws, decrees, ordinances, resolutions, among others. Agencies involved include the Ministry of Education (MEC), the National Institute for Educational Studies and Research (Inep), the National Press (IN), and the Secretariat for the Regulation and Supervision of Higher Education (SERES) (PEIXOTO; PINTO, 2021).

This study does not aim to cover a large number of these documents. Instead, it provides an overview of the regulatory framework of education concerning institutional evaluation processes, relating them to policies adopted by high government management in these processes, particularly within MEC and Inep. The goal is to present documents that are relevant to the discussions in this text and that will appear throughout the study, or that are fundamental to the thematic discussion of this work.

Institutional evaluation plays a role in verifying compliance with regulations and is an essential instrument in the regulatory process. It is considered one of the structuring axes of public administration reforms, with implications for higher education, enhancing its role in evaluation, self-evaluation, and control of higher education institutions (IES) (PEIXOTO; PINTO, 2021).

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Supported by the Law creating the National System of Evaluation of Higher Education (Sinaes), Law No. 10.861, April 14, 2004 (BRASIL, 2004), and Decree No. 5.773, May 9, 2006 (BRASIL, 2006), a strong foundation was provided for the quality evaluation process of higher education with the systematization and articulation of regulation. This was achieved through the regulations on the exercise of regulatory, supervisory, and evaluative functions for IES and undergraduate courses (PEIXOTO; PINTO, 2021).

Enade, one of the Sinaes instruments, aims to assess the performance of higher education students, the development of competencies and skills in General and Professional Education, and their level of awareness regarding Brazilian and global realities. Alongside in loco evaluations, it allows for the assessment of the quality of courses and Brazilian IES. Enade results, combined with responses from the Student Questionnaire, contribute to the calculation of higher education quality indicators (INEP, 2022b).

Student participation in Enade is mandatory, meaning registration is compulsory for incoming and graduating students of bachelor's, licentiate, and higher technology courses linked to the evaluation areas of the edition (INEP, 2022b). This status is recorded in the student's academic history. Inep, in conjunction with Commissions, Councils, and other Groups linked to higher education in MEC, defines the Enade Evaluation Cycle and determines the evaluation areas and related courses. Knowledge areas for bachelor's and licentiate courses derive from the Table of Knowledge Areas published by the National Council for Scientific and Technological Development (CNPq). Technological axes are based on the National Catalogue of Higher Technology Courses (CNCST) from MEC (INEP, 2022b).

Chart 2 presents the evaluation cycles, their knowledge areas, and technological axes.

Chart 2 – Enade evaluation cycles from 2018.

ENADE EVALUATION CYCLES	
Cycle (Year)	Area of Knowledge/Technological Axis
I	Bachelor's degree programs in the fields of Agricultural Sciences, Health Sciences, and related areas; Bachelor's degree programs in the fields of Engineering and Architecture and Urbanism; Higher education technology programs in the areas of Environment and Health, Food Production, Natural Resources, Military, and Security
II	Bachelor's degree programs in the fields of Biological Sciences; Exact and Earth Sciences; Linguistics, Languages, and Arts, and related areas; Teaching programs in the fields of Health Sciences; Human Sciences; Biological Sciences; Exact and Earth Sciences; Linguistics, Languages, and Arts; Bachelor's degree programs in the fields of Human Sciences and Health Sciences, with programs evaluated within the scope of teaching degrees; Higher education technology programs in the areas of Industrial Control and Processes, Information and Communication, and Infrastructure and Industrial Production
III	Bachelor's degree programs in the fields of Applied Social Sciences and related areas; Bachelor's degree programs in the fields of Human Sciences and related areas that are not also evaluated within the scope of teaching degrees; Higher education technology programs in the areas of Management and Business, Educational Support, Hospitality and Leisure, Cultural Production, and Design.

Fonte: Adaptado de Inep (2022).

Finally, in Chart 3 we present the main regulatory frameworks of interest to this study.

Chart 3 - Key Regulatory Milestones in Brazilian Education.

Regulatory Framework	
Constitution	Federal Constitution of Brazil of 1988 (CF/88)
Laws	Law No. 9.934 of December 20, 1996 (LDB); Law No. 10.861 of April 14, 2004 (Sinaes); Law No. 11.096 of January 13, 2005 (ProUni); Law No. 13.005 of June 25, 2014 (PNE); Law No. 12.989 of June 6, 2014 (Proies); and Law No. 13.530 of December 7, 2017 (Fies).
Decrees	Decree No. 2.306 of August 19, 1997 (Regulates Evaluation); Decree No. 5.773 of May 9, 2006 (IES Evaluation); and Decree No. 9.235 of December 15, 2017 (Regulation).
Ordinances	Normative Ordinance No. 2,051 of July 9, 2004 (IES Evaluation); Normative Ordinance No. 40 of December 12, 2007 (e-MEC); and Normative Ordinance No. 4 of August 5, 2008 (Sinaes Cycle).
Plans	National Education Plan (PNE 2001-2014) and National Education Plan (PNE 2014-2024).
Resolutions	Resolution No. 1 of December 2019 (CNE)

Source: Prepared by the authors (2022).

By highlighting these key educational regulatory acts, their relevance in times of heightened attacks on the educational system, particularly on the quality assessment system, is emphasized. The aim is to underscore that there has been a process of developing assessment processes over the past decades in the country that needs to be considered. The mobilization, starting in 2018, by current government policy makers to dismantle and regress these processes should be countered with arguments that support the educational assessment systems in Brazil. In addition to the pandemic period, an educational policy within the Ministry of Education (MEC) made it difficult to maintain

The Relationship between Institutional Assessments and the National Item Bank actions in higher education. This occurs on various fronts: through the blocking of funds for higher education; various attacks on the management of higher education policy; and distorted analyses of higher education assessment results public calls made by Inep aim to build a network of educators interested in developing and reviewing items for the National Item Bank (BNI), thus constituting the BNI Collaborators' Bank for each assessment or examination in development (INEP, 2022a). The BNI-Enade has established itself as an essential tool for storing items, organized according to specific criteria, available for creating assessment instruments for higher education in the country (INEP, 2022a). The maintenance and continuity of this bank depend on the constant addition of items of a certain quality standard. To this end, Brazilian higher education faculty are invited each year to contribute to the creation and review of items that may become part of this bank.

This bank provides inputs for various assessments and exams developed within Inep, ensuring access to quality items, developed and reviewed for each measurement tool. As noted, it is crucial for the development and application of national large-scale assessments in higher education, which differ from internal assessments as they are not created by the teacher or the institution itself to evaluate and propose pedagogical alternatives within the classroom or the institution. These assessments are developed by an external body, such as Inep, and large-scale assessments aim to make value judgments and propose alternatives on a broader scale than the institution, such as an educational system (INEP, 2022a).

In addition to these large-scale assessments, the BNI also meets the demand for items for Inep's exams. Chart 4 highlights the assessment instruments that utilize Inep's BNI.

Chart 4 - Assessment instruments that use Inep's BNI.

UTILITARIAN PROCESSES OF INEP'S BNI	
Assessment Instrument	Educational Level
Certificate of Proficiency in Portuguese (Celpe-Bras).	Basic
National Student Performance Exam (Enade).	Higher
National Certification Exam for Youth and Adults (ENCCEJA).	Basic
National High School Exam (Enem).	Basic
International Student Assessment Program (PISA).	Basic
National Validation Exam for Medical Diplomas Issued by Foreign Higher Education Institutions (Revalida).	Higher
Basic Education Assessment System (Saeb).	Basic
Certificate of Proficiency in Brazilian Sign Language (Prolibras)	Basic

Source: Prepared by the authors (2022).

As discussed previously, it is through the BNI (National Item Bank) that Inep ensures a quantity of high-quality items, both technically pedagogical and psychometric, for composing large-scale assessment tests and exams. Thus, maintaining this item bank is crucial for having a collection of

specifically designed test items, organized according to certain criteria, available for the construction of evaluation instruments (INEP, 2022a).

The participation of educators from all over Brazil in public calls for the development and revision of items for the BNI-Enade diversifies and enhances the appropriateness of the instruments used for evaluating this level of education in the country. These public calls are part of the broader process of structuring Inep's network of collaborating educators, who are required to participate in training courses, workshops, and panels for item development and revision. Access to and retention in the Inep collaborators' bank require verification of the information provided by the educators. Those who do not provide proof of the information in the selection process are disqualified and barred from participating in other Inep public calls for a period of twenty-four months and may also face legal consequences (INEP, 2022a).

The BNI for higher education, established in 2010 by Inep, aims to enhance the examination by creating items developed by experienced educators who, in addition to their experience, undergo updated training courses. Another important aspect of the BNI is security, as it provides the necessary security for the test construction process, reliability, and ensures broader participation of educators in item development (INEP, 2022a).

According to Campos (2013), the BNI-Enade consists of a computerized system in which items of specific nature are stored and can be used in Enade exams conducted by Inep. The author emphasizes that these items are organized according to criteria set for each edition of the exam and that this bank contains a collection of items developed considering content matrices, competencies, and skills that allow for the assembly of exams to assess the proficiency of graduates from undergraduate courses (CAMPOS, 2013).

Analysis and Discussion of Results

The clarifications provided in the previous sections help to understand certain educational data obtained for the period during which Inep experienced fluctuations. Table 2 highlights the situation of similar moments in the evaluation of items for the 2017 and 2020 editions of Enade. In the 2020 edition, areas of knowledge from the new evaluation cycle were included. It was established that the 2020 edition would assess areas of knowledge that were evaluated in the 2017 edition, with the exception of engineering and architecture, which were moved to a different evaluation cycle.

The Relationship between Institutional Assessments and the National Item Bank
Table 2 – Assessment of Enade Items from the 2017 and 2020 Editions

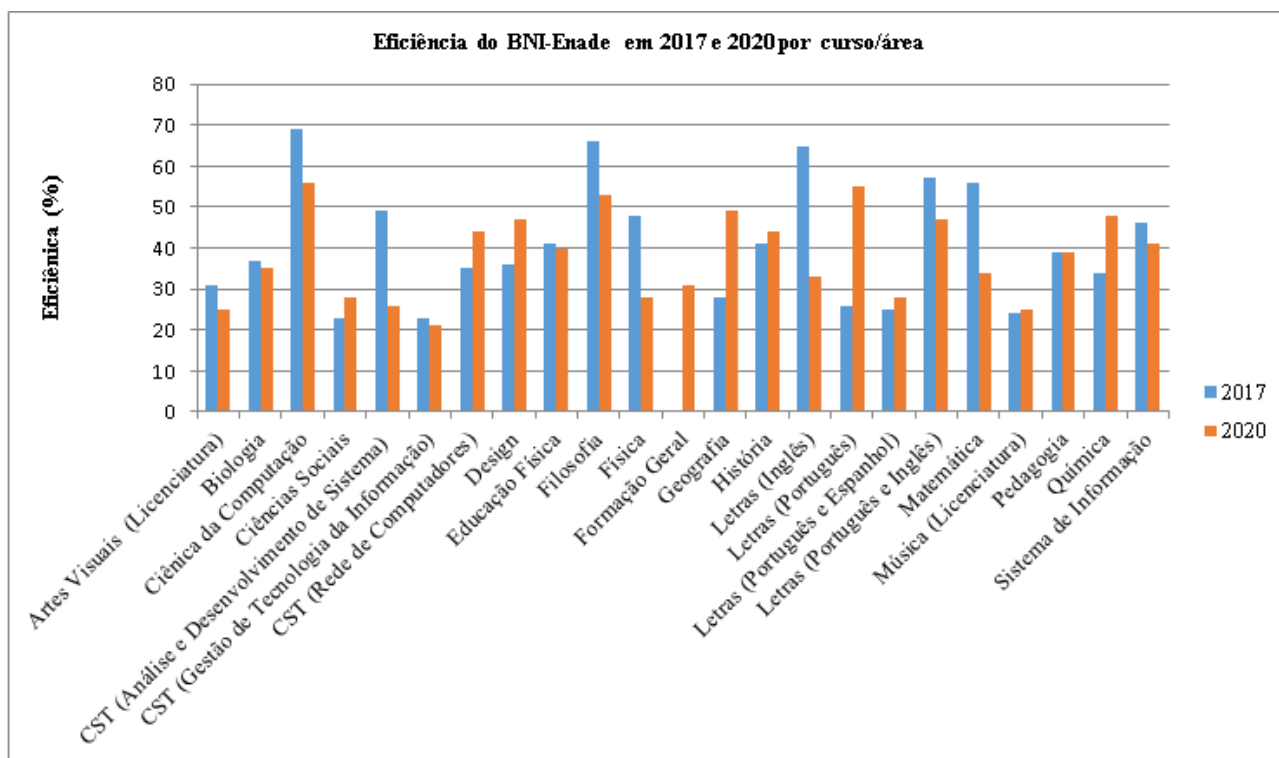
ASSESSMENT OF ITEMS FROM THE 2017 AND 2020 EDITIONS OF ENADE								
Area of Knowledge	Accepted		Discarded		Not Assessed		Total	
	(2017)	(2020)	(2017)	(2020)	(2017)	(2020)	(2017)	(2020)
Visual Arts (Degree)	63	55	43	29	0	15	106	99
Biology	91	74	73	46	0	7	164	127
Computer Science	190	191	43	70	0	28	233	288
Social Sciences	65	67	90	63	0	4	155	134
CST (Systems Analysis and Development)	115	59	58	33	0	19	173	111
Information Technology Management	70	53	06	57	0	0	176	110
CST (Computer Networks)	90	86	82	24	0	17	172	127
Design	65	84	33	26	0	4	98	114
Physical Education	86	130	50	99	0	21	136	250
Philosophy	141	94	27	23	0	3	168	120
Physics	105	67	51	17	0	49	156	133
General Education	4	53	28	22	0	0	32	75
Geography	76	78	88	19	0	1	164	98
History	122	107	102	69	0	0	224	176
Literature (English)	126	61	22	33	0	0	148	94
Literature (Portuguese)	77	104	102	26	0	4	179	134
Literature (Portuguese/Spanish)	59	58	56	32	0	11	115	101
Letters (Portuguese/English)	90	99	15	46	0	3	105	148
Mathematics	179	74	86	35	0	21	265	130
Music (Degree)	54	54	46	40	0	2	100	96
Pedagogy	116	83	102	26	0	26	218	135
Chemistry	106	127	118	58	0	19	224	204
Information Systems	136	83	93	25	0	21	229	129
TOTAL	3177	1941	2011	1918	0	275	5188	3134

Source: Prepared by the authors based on Brazil (2020; 2022).

The items produced for the Enade exam follow a process where, after the exam is administered, they are either accepted (approved) or discarded. Accepted items become part of the BNI-Enade, while discarded items are removed from the BNI-Enade system. For the BNI-Enade, of the 3,134 items produced for the 2020 Enade edition, 275 have not yet been evaluated. Out of the 23 areas of knowledge, including General Education, only 17% do not have items to be evaluated. This means that 83% of the areas of knowledge have items that are either accepted or discarded. For instance, in the Physics area, out of 133 items produced, 49 have not yet been evaluated (BRASIL, 2022a).

In **Graph 1**, the efficiencies of the areas of knowledge and the General Education area assessed in 2017 and 2020 are presented.

Graph 1 – Efficiency of Courses and General Education, assessed in 2017 and 2020.



Source: Prepared by the authors based on Brazil (2021; 2022).

Based on the data presented in this graph, it can be inferred that, overall, the efficiency of the BNI-Enade assessed in 2017 was lower than that assessed in 2020. Although there are still 275 items pending evaluation for the 2020 edition, this is unlikely to significantly affect this scenario, as the rate of discarded items is similar to the rate of accepted items. Following the completion of item evaluations, efficiency might slightly increase or decrease significantly.

In the 2017 edition, the General Education area had a negative efficiency. Therefore, for comparison purposes, it is reasonable to consider the efficiency of this area as zero in 2017. This indicates that if no further attempts were made to create and evaluate items for this area in that edition, there was a deficit in the BNI-Enade for General Education. This results in a reduction of items in the BNI-Enade for General Education, which might cause a shortage of available items in this area.

A noteworthy observation in this comparison is that the efficiency of some courses remained close to 30%. In comparing these two editions, this occurs in the courses: Social Sciences; CST Management of Information Technology, Portuguese and Spanish Letters, and Music (Licentiate). An intriguing fact is that the courses in Physics and English Letters experienced a decrease in their efficiencies. Conversely, the courses in Geography and Portuguese Letters saw an increase in their efficiencies.

Final considerations

From the analysis and discussion proposed throughout this study, the manipulation and interpretation of official data provided by Inep enabled the qualitative and quantitative exploration of the subject. The results indicated an expectation that the data and information would indeed reflect the reality of the structure in BNI-Enade, thereby highlighting the construction of institutional evaluations.

This led to the following questions: What pedagogical measures have been taken by the General Coordination of Enade (Cgenade) at Inep to ensure that item creators and reviewers can provide better results for BNI-Enade? Has the efficiency of BNI-Enade in the areas of knowledge progressed from one cycle to the next? These questions were examined based on data analysis provided by Inep and reviewed literature.

The study achieved its central objective, which was to analyze the production of items for the Enade exam and to compare item production between the two most recent editions of the same Enade cycle.

The measures adopted by the staff responsible for managing BNI-Enade through Inep's Higher Education Evaluation Directorate (DAES) demonstrate an effort to meet the needs of this item bank. The initiatives to extend this supply through public calls have contributed to an increasing number of quality collaborators in item creation and review processes.

The comparability of efficiency between editions of Enade is neutral due to the rotation in the Area Advisory Committees (CAA). This fact alone hinders direct comparability between results from different editions of Enade. However, measures implemented in the training courses for item creators and reviewers tend to improve item production efficiency. Persistent low efficiency could harm BNI-Enade and compromise future Enade test constructions.

In conclusion, this study outlined its scope based on the data provided by Inep and the issues addressed. Difficulties in comparing with other data sources for the relevant periods, such as variables analyzed that may not have the same connotations and are defined arbitrarily according to the study's convenience, like accepted items and BNI-Enade efficiency, were noted.

Future research could further explore or provide new dimensions of analysis regarding long-term institutional evaluations; the actual costs of BNI for higher education processes; and extend the understanding of the relationship between institutional evaluations and the national item bank.

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