

Enade: are the students motivated to take the test?

Abstract

Objective: Based on the assumptions of theoretical and sociocognitive approaches, this study aimed to identify the levels of motivation of Accountancy students to take the Enade (National Exam for the Assessment of Student Performance), with and without the provision of extrinsic motivation mechanisms. Descriptive research with a quantitative approach, performed through a survey of 1,082 students from 122 Brazilian institutions.

Method: This is a descriptive research with a quantitative approach, carried out by means of a survey. To test if there were significant differences in the levels of student motivation, with and without the provision of motivation mechanisms to take the Enade, the non-parametric Mann-Whitney and Wilcoxon tests were used.

Results: It was verified that the motivation levels of the students investigated to take the Enade 2015 are statistically inferior to their motivation to take the Accountancy program. The results pointed out that the supply of stimuli, whether the registration of the score on the degree; use of the score for admission to graduate studies; use of the score for public examinations or for the CFC professional qualification examination, as a reward for these students, positively affects the intention (motivation) to take the Enade.

Contributions: Considering that Enade has been consolidated as a large-scale assessment in Brazil, adjustments that help to make the system more accurate are important. The findings of this study suggest that the use of the students' Enade score in post-college stages may serve as a stimulus for them to focus more on the assessment, reducing the resistance, the "boycotts" and making the exam results more precise, especially in the Accountancy course, which ranks fourth in number of enrollments in Brazil, and because the students are subject to another evaluation for professional practice, the Proficiency Examination.

Key words: Sinaes, Enade, Accountancy, Motivation.

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1. Introduction

In the report *Education at a Glance 2015*, elaborated by the Organisation for Economic Co-operation and Development (2015), the important advances Brazilian education has achieved in recent years are evidenced. The higher percentage of the Gross Domestic Product (GDP) invested in the different teaching levels and modalities and the consequent increase in the number of places is one example. Nevertheless, the report also highlights relevant problems that need to be overcome. Among the countries analyzed, Brazil presents the highest percentage (76%) of youth between 20 and 24 years of age not on the school benches, with 20% of young people neither studying nor working.

In the same sense, in the most recent National Higher Education Census, published by the National Institute of Educational Studies and Research Anísio Teixeira (2016), significant advances are shown in the expansion of places offered in higher education in Brazil in the past decade. The number of enrollments in higher education jumped from 3,887,022 in 2003 to 8,033,574 in 2015, representing a growth by almost 107% in just over a decade. Among the most popular programs, in the “face-to-face” and “distance” modalities, we highlight Accountancy, which ranks fourth, following Law, Administration and Pedagogy, corresponding to 4.5% of the higher education enrollments registered in 2015.

The growth experienced in Brazilian higher education, although very important, still represents little compared to the country’s position when compared to other nations. In addition, in order to consolidate higher education within desirable parameters in Brazil, it is important that growth occurs with quality, in other words, more places are required, but also conditions to proceed with and complete the course. It is therefore necessary that the quantitative evolution be properly monitored by means of an evaluation system that is able to measure the experts from the Brazilian Education Department (MEC) highlight, such as: teaching, institutions and teachers.

To that end, some higher education assessment programs have been tried out since the 1990s in Brazil, such as: Provão (also known as ENC) and the National System for the Assessment of Higher Education (Sinaes). The current system is the Sinaes, whose purpose is to accurately assess students, teachers and institutions. Criticism against the system includes the fact that there are no stimuli that motivate the students to explore their full capacity during the evaluations, as their scores are neither disseminated nor used for other purposes.

The law regulating Sinaes sets some benefits for the better performing students, but these possible “awards” are not widely disseminated. In fact, they are unknown to most students and teachers. These weaknesses contribute to the fact that, in some cases, the grades obtained by the institutions do not accurately represent the students’ performance. In this respect, some studies show possibilities of students’ boycotts and lack of interest (Leitão, Moriconi, Abrão & Silva, 2010; Borges, Silva & Miranda, 2015). Boycotts do not necessarily represent extreme attitudes, such as not showing up for the test - as this could result in sanctions which students and higher education institutions are subject to - but the non-performance of the assessment with the necessary stimulus to measure the students’ true skills and knowledge.

Considering the importance of evaluation, the participants’ low levels of motivation could make the results of the exam less accurate, which would be detrimental to educational institutions and to Sinaes itself. In this context, the Accountancy program also stands out, but in a negative sense, as the course has been ranked in the final positions since the first edition, which took place in 2006, with average Enade scores (specific and general knowledge) around 37%.

In order to make assessments more accurate and, consequently, strengthen Sinaes, it is important to search for ways to motivate students to take the Enade. For this purpose, sociocognitive approaches, which root in behavioral theories, establish the existence of two motivational orientations that may contribute to the understand the mechanisms that possibly evidence the factors that stimulate students to carry out the evaluation in a motivated way: a) intrinsic motivation: when the students study because they likes the activity itself, they are not subject to pressure and their stimulus originates in needs inherent in themselves; b) Extrinsic motivation: when the students study to achieve something external or to avoid punishment, they aim to achieve desirable or avoid undesirable effects (Amabile, Hill, Hennessey & Tighe, 1994; Harackiewicks & Elliot, 1993; Mandelink & Harackiewicz, 1984). Studies on motivation in Accountancy programs in Brazil have shown that students are sensitive to extrinsic motivation mechanisms (Leal, Miranda & Carmo, 2013).

In view of the above, an important research gap is identified: **could the use of Enade results in later stages of the students' career alter the motivation levels to carry out the assessment?**

The general objective of the research is to identify the motivation levels of Accountancy students to take Enade with and without the supply of motivational stimuli. The specific objectives are: (a) to identify the students' motivation levels to take the Accountancy program; (b) identify the students' motivation levels to take the National Secondary Education Exam (Enem) (students who took the Exam) and to take Enade 2015; (c) identify the motivation levels through the supply of extrinsic motivation mechanisms to take Enade; (d) confront these motivation levels; (e) assess if, according to the investigated students, this research could affect their motivation levels to take Enade 2015.

2. Assessment Systems of Higher Education in Brazil

The evaluation process has existed in the educational system for some time and is part of several educational systems in different countries. Freitas and Cornacchione (2015) emphasize that the theme "evaluation" is present in the institutions either to measure the students' learning process or to verify the conditions of their teaching. For Dias Sobrinho (2010), the evaluation is an important tool to optimize the organization and implementation process of educational reforms. The author points out that the evaluation system produces "changes in curricula, teaching methods, education concepts and practices, management, power structures, institutional models, educational system configurations, research policies and priorities, notions of pertinence and social accountability" (p.195).

Based on this assertion, it is noticed that the evaluation not only analyzes the educational system, but also guides behaviors, whether of the educational institutions, so that they conform to the way in which they are evaluated; or of other agents involved in this process, such as course coordinators, teachers and students. In this sense, Melo, Nunes, and Michels (2012, p.857) highlight that "evaluation is viewed with resistance by the various segments of the academic community of Brazilian higher education institutions".

When analyzing the evolution of the evaluation systems of higher education in Brazil, it is noticed that this took place for the first time in 1970, when Capes assessed the Master's and doctorate courses. Somewhat later, some regulatory attempts took place in the undergraduate courses, such as: the University Reform Assessment Program (Paru) from 1983 to 1984; the Commission of Notables and Executive Group for the Reform of Higher Education (Geres), which existed between 1985 and 1986; there was an institutional "Self-assessment experience" between 1987 and 1992; and, in 1993, the Institutional Evaluation Program of the Brazilian Universities (Paiub) started (Polidori, Marinho-Araújo & Barreyro, 2006).

According to Santos (2012), the first effective evaluation instruments of undergraduate education in Brazil began in the government of Fernando Henrique Cardoso in 1995, with the creation of Law 9.131 / 1995, which was in force from 1995 to 2002. Through this law, the National Course Exam (ENC), better known as Provão was established. The law mandated that the ENC-Provão be applied annually and should cover the minimum contents, in order to verify competences, skills and essential contents the higher education graduates acquired, respecting the specificities of each knowledge area. It was the responsibility of the Ministry of Education (MEC) to disseminate the concept the student obtained in the media and to register it in the student's academic records (Santos, 2012).

The ENC-Provão was in force until 2003, when the government of former President Luiz Inácio Lula da Silva established the National System for the Evaluation of Higher Education (Sinaes) (Santos, 2012). The legal framework regulating Sinaes is determined in Law 10.861, dated April 14, 2004. According to this mechanism, students are assessed through the National Exam for the Assessment of Student Performance (Enade).

Law 10.681, from 2004, prescribes that this assessment takes the role of compulsory curricular component in undergraduate courses. In the student's academic history, only his or her regular status with respect to this "obligation" is recorded, certified by his or her actual participation or official dispensation by the Ministry of Education, in the manner established by regulation.

The head of the higher education institution is responsible for enrolling the students qualified to take the Enade of INEP. Failure to comply with this determination is subject to sanctions according to Law 10.681, article 10, paragraph 2, from 2004. The unsatisfactory results have to be submitted to a commitment protocol signed between the higher education institution and the Ministry of Education. Failure to comply with this protocol, fully or partially, may result in the following penalties mentioned in paragraph 2: I - temporary suspension of the opening of a selection process for undergraduate courses; II - cancellation of the higher education institution's authorization to operate or of the recognition of the courses the institution offers; III - warning, suspension or loss of mandate of the manager responsible for the action that was not executed, in the case of public higher education institutions.

The Law that regulates Sinaes, and therefore Enade, not only establishes sanctions and penalties, but also benefits for well-performing students. According to article 5, § 10, the Ministry of Education will grant incentives to the best performing students on Enade in the form of a scholarship, or specific aid, or some other form of distinction with a similar purpose, aimed at favoring the excellence and continuity of the education, at the undergraduate or graduate level, as established by regulation.

It should be noted that Enade has undergone changes over the years, compared to the way it was originally created. For example, in 2009, the examination became population-based instead of sampling-based (as it was initially) and, in 2011, it was no longer applied to students and was only applied to graduates (Brito, 2015).

The literature on evaluation systems in Brazil appoints some considerations in this respect. For Polidoro, Marinho-Araújo and Barreyro (2006), it is a complex system, considering the diversity of courses evaluated and the territorial extension of Brazil. In this sense, the challenge is to align regulatory needs with the institutions' evaluation culture. For Dias Sobrinho (2008):

In a context of quantitative explosion of higher education systems and multiple social demands, different actors dispute the roles that higher education would play in relation to the state, society, the market, the educational community, "customers", the productive sector, as well as the various types of service the institutions should offer. (Dias Sobrinho, 2008, p.1)

For the author, Sinaes "is no longer a production of meanings, questioning the pertinence and the scientific and social relevance of education and knowledge, and is reduced to measuring and controlling" (Dias Sobrinho, 2008, p.5). In other words, the system would diminish to indices. Sharing this view, Brito (2008) states that, in most cases, these indicators are used to allocate resources and to publicize an image of the institution, but they do not effectively contribute to the improvement of HEI.

Dias Sobrinho (2008) also points out that the system is expressed through the analysis of student performance (measured through Enade), which results in classifications and rankings among institutions, but the quality analysis of courses and institutions is much more than that. Furthermore, according to the author, “there is no educational theory that argues that a student’s performance on a test fully guarantees learning, or that the result of a group of students on an exam is equal to the quality of a course” (p. 6), especially when the students do not have motivations to perform these exams.

Further criticism presented by Dias Sobrinho (2008) concerns teaching and research activities:

INEP asks, for example, if there is a course plan, but does not question the meanings of this course plan, if it is appropriate to the institutional mission, if it is well developed, corresponds to the needs of society and what ethical-political conception it fits into, what type of training is appropriate, etc. The existence of laboratories is another question, but without distinguishing the relative importance and the pertinence of a laboratory for each particular course (for example, engineering and philosophy require different inputs) (Dias Sobrinho, 2008, p.822).

All this generates a reversal of roles, so that the teachers and researchers no longer determine the educational policies within the institution, but rather the agents external to the reality of the institution, through the evaluation systems (Dias Sobrinho, 2008).

Despite criticism, Enade seems to be a valid indicator because, according to Hanushek (2002), the application of standardized tests is one of the most used means to measure the quality of teaching. According to Leitão *et al.* (2010), however, students and institutions sometimes challenge the exam. The authors affirm that, at various moments, the media reports on students claiming that the weight the student receives in the accomplishment of the exam is unfair, as the final objective is to evaluate the course and not the student actually. They also point out that countless institutions complain that students are not encouraged to commit to Enade, which ends up affecting the results of courses and institutions. It should be highlighted that the Enade test does not only evaluate general and specific knowledge related to the training area. Its socioeconomic questionnaire also covers aspects related to the institution, such as infrastructure, pedagogical organization, teacher training, among other factors that also act as determinants of academic performance.

For Leitão *et al.* (2010), the application of exams nationally generates discussions about the students’ probable lack of involvement and resistance in the evaluation process. The authors present two different categories of boycott: the first involves those students who glue stickers or produce any type of explicit register against the examination. The other category includes those students who do not answer any question in the test but deliver the evaluation blank. In both cases, students attend the test but do not perform as expected.

The absence on the day of the test could be considered a possibility of boycott. When analyzing the compulsory nature and the punishment the students are subject to when they do not attend (non-issuance of the degree), this kind of boycott would not be feasible. In addition, it would be difficult to segregate the cause of the absence, if it would be a boycott or if the student really could not attend the assessment due to other reasons (Leitão *et al.*, 2010). Leitão *et al.* (2010) also found that the “boycotting” students tend to present a higher family income, parents with a higher education level and took most of their secondary education at private schools. In addition, they tend to assess institutional aspects (physical structure and pedagogical aspects) negatively, which can indicate that, sometimes, the students boycott Enade to demonstrate their dissatisfaction with the course or the institution. Pederneiras, Lopes, Ribeiro Filho and Feitosa (2011) analyze the students’ participation in Enade from another perspective. The authors raise the hypothesis that three factors can influence the result of this test: sensitization, motivation and commitment. In this study, the authors found that the interviewees (leaders and managers) reported that the students are not motivated to take the Enade and only attend because they are obliged to participate as, if they do not, they do not get their degree. The interviewees also highlighted that there should exist incentives for the student to take the test. Based on the studies cited, it is noticed that the students’ lack of motivation to take the test can affect the performance achieved, as the discouraged students can lose their commitment to the exam, whether through the boycott or the lack of effort to properly solve all issues. Anyway, this commitment can interfere in the result of the institutional and course assessment.

3. Self-determination theory

According to Robbins (2005), “motivation is the result of the individual’s interaction with the situation” (p.132), as people have different basic motivational tendencies caused by the situation. Conceptually, motivation is “the process responsible for the intensity, sense and persistence of a person’s efforts to achieve a certain goal” (p.132). In the same line of understanding, Lens, Matos and Vansteenkiste (2008) understand that motivation is “a psychological process in which personality characteristics (e.g. motives, reasons, abilities, interests, expectations, future perspective) interact with the perceived environmental characteristics” (p.17). Nakamura, Fortunato, Rosa, Marçal, Pereira and Barbosa (2005) understand that motivation is considered an impulse that makes people work to achieve their goals and persist until reaching them. That is, it is a factor that incites the person towards some goal and provokes a new mood; the person begins to act to achieve this goal and also to visualize new horizons, new achievements.

Motivation is considered to be multifaceted, as it varies according to the needs, motives and incentives of each human being. In the educational field, motivation is an extremely important element that can signal a student’s success or not. Guimarães and Boruchovitch (2004) affirm that motivated students are characterized by: being actively involved in the learning process; persistently engaging in challenging tasks; using the relevant strategies; seeking to increase and / or create new skills of understanding and mastery; being enthusiastic and proud (in the sense of honor) through the results of their performance. The positive results achieved are stimuli to continue working towards constant improvement, personally and of the context they figure in. On the other hand, Guimarães (2009) affirms that discouraged students will passively position themselves in the teaching-learning process, showing little effort and low persistence to reach their goals, resulting in dissatisfaction in performing tasks that are imposed and presenting results below expected.

The sociocognitive approaches highlight the existence of two motivational orientations: the intrinsic and the extrinsic (Amabile *et al.*, 1994; Harackiewicz & Elliot, 1993; Mandelink & Harackiewicz, 1984). According to Guimarães (2009), intrinsic motivation is manifested in individuals when they perform a task with an end in itself, out of interest and pleasure, that is, the activity is carried out on their own initiative, the incentive already resides in the actual execution of the activity, which is then called autotelic. Unlike intrinsic motivation, the extrinsic type denotes the fulfillment of a given task for a reason external to it, such as: receiving material or social rewards, avoiding punishments, or feeling forced or pressured to develop something. For the extrinsically motivated students, the achievement of a certain task becomes their goal when they want to obtain external rewards (Guimarães, 2009).

The extrinsically motivated students need external stimuli to perform a task, either by formal requirements such as grades, or by awards, rewards or even to avoid reprimands (Guimarães & Bzuneck, 2008). The intrinsically motivated students, on the other hand, take pleasure in studying, in fulfilling the proposals, without resistance and face each new stage as a challenge, regardless of external stimuli or rewards. In the words of Guimaraes and Bzuneck (2008), it is the perfect style of self-determination and brings together its three elements: i) internal locus (behavior has origin and personal regulation); ii) psychological freedom (people adopt a certain behavior because it is consistent with their interests, preferences and needs); iii) perception of choice (flexibility in decisions about what to do, how or even the possibility of not doing).

The deepening of the studies on intrinsic and extrinsic motivation gave rise to the Self-determination theory proposed by Ryan and Deci (1985). This theory originated in the 1970s after the results of three different investigations carried out in laboratories in different parts of the world. In the perspective of the Self-determination theory, the predisposition to achieve a healthy development and self-regulation is inherent in the human being. In the preliminary studies by Ryan and Deci (1985), motivation was considered a unitary construct, presenting variations only in number. With the evolution and maturation of the authors’ studies, in relation to the quality of motivation, a distinction was made between motivational levels. For the authors, motivation depends on a set of variables internal and external to the individual.

Thus, intrinsic and extrinsic motivation are part of the same construct; they are neither static nor mutually exclusive; they are interdependent, manifest in individuals according to their predispositions or stimuli; they are not two opposite hubs. Ryan and Deci (1985) demonstrate the configuration of the different motivational levels, classified in three groups: intrinsic motivation, extrinsic motivation and demotivation. These elements are integrated, composing a continuum that underlies the Self-determination theory, in accordance with Figure 1.

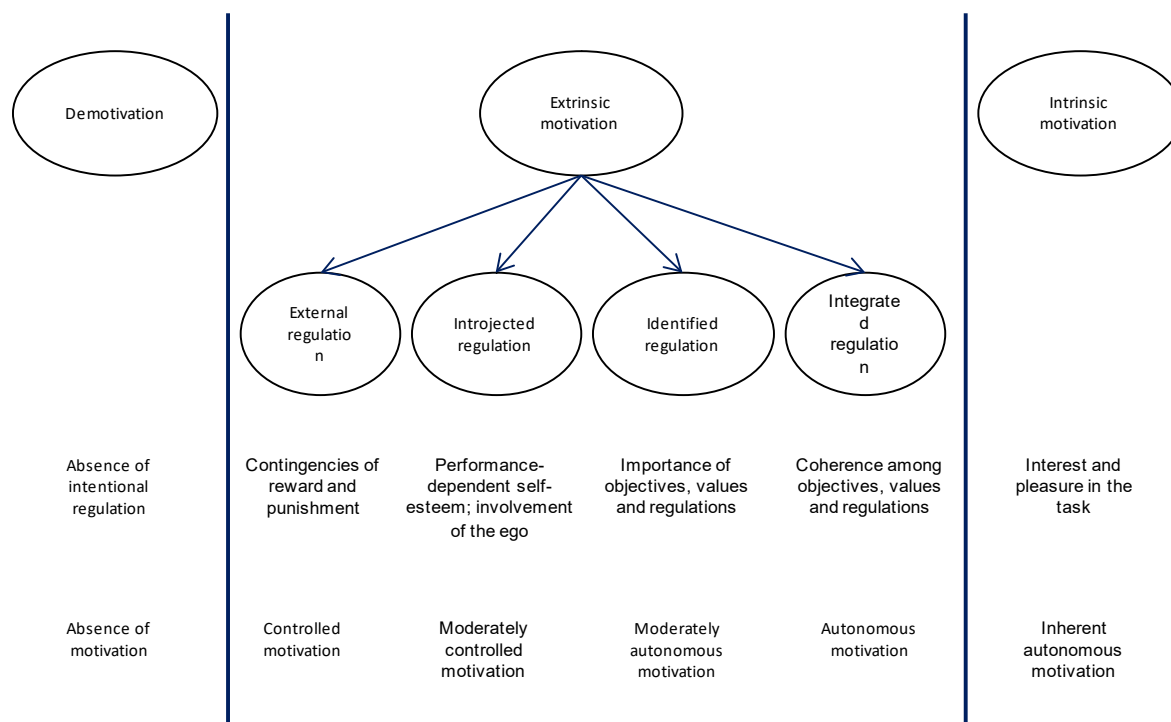


Figure 1. Self-determination Continuum

Source: adapted from Gagné and Deci (2005, p. 336).

Extrinsic motivation is subdivided into four levels of regulation, ranging from a purely external form to an integrated regulation, close to intrinsic motivation. The authors also affirm that intrinsic motivation and self-regulated forms of extrinsic motivation depend on the satisfaction of the three basic needs: competence, autonomy and relationship.

Leal, Miranda and Carmo (2013) analyzed Accountancy students in relation to motivation in the light of the Self-determination theory. The investigated students presented a self-determined motivation profile, with the highest average for intrinsic motivation; secondly, the extrinsic motivation by external regulation. The motivation averages of new students (first year of the course) and graduating students (last year of the course) were analyzed. The results indicated that, at the beginning of the course, students have higher levels of autonomous (intrinsic, integrated and identified) motivation and, over time, the situation reverses, that is, the types of non-autonomous motivation (introjected, external and unmotivated) score higher in the last years of the course. The authors reported that the Accountancy students present signs of motivation that drive them to get the degree and the possibilities it offers, such as employment, better remuneration, quality of life, prestige, etc.

Also based on the self-determination theory, Coura, Batista, Albuquerque, Carvalho and Oliveira (2015) investigated the types of motivation of Accountancy and Business Administration students at the Federal University of Campina Grande. The results showed that the students of the two investigated courses are motivated both intrinsically and extrinsically, presenting greater alignment with the “Intrinsic to Know” motivation, followed by the “Extrinsic Regulation-external” motivation. The authors did not identify significant differences between the courses, nor an evident relation with the academic performance or stage of completion of the course.

Lopes, Pinheiro, Silva and Abreu (2015) analyzed the intrinsic and extrinsic motivational factors characteristic of the Accountancy students in public and private institutions of Bahia, as well as the variables proposed by the Self-determination theory. There were no statistically significant differences between the students’ motivation at public and private HEI, but they found that, on average, women were more extrinsically motivated by introjection and intrinsically motivated than men. The new students, on the other hand, are more motivated by introjection and less demotivated than the graduating students.

4. Methodological Aspects

The objective of this research is to analyze the motivation of the Accountancy students to take Enade in 2015. It is a descriptive research with a quantitative approach, carried out by means of a survey.

The research instrument consisted of two blocks of questions. The first addressed with questions related to the characterization of the respondents, such as: gender, current period and semester, age group, occupation and whether they were participating or had participated in academic activities (examples: scientific initiation, PET, monitoring, junior company, etc.).

The second block of the questionnaire consisted of questions related to student motivation: a) to take the Accountancy course; b) to participate in Enem (those who participated in the evaluation); c) to take Enade in 2015; d) to take Enade under the hypothesis of using the score (for admission to graduate studies, for public examinations, for proficiency exams, for registration in the degree). In this block, for each question, students should inform their level of motivation on a scale from zero to ten points. The scale was continuous and scores could be given with decimal or centesimal variations for example. Thus, zero means that the student is totally demotivated, while 10 represents the totally motivated student, and five, half of the scale, implies that the student is neither motivated nor demotivated, that is, indifferent as to whether to take the test.

A pre-test was carried out with ten professors from the areas of Business Administration, Accountancy and Education, all of them researchers in Education and/or Business. After several contributions from participants, the instrument was finalized and implemented.

Through the E-Mec Platform, the electronic addresses of the Brazilian Accountancy courses were obtained. With these contacts, the questionnaires were sent to the course coordinators and/or directors, with the request that they be sent to the students. Three submissions were made at one-week intervals, with different calls for student participation, as suggested by Gall, Gall & Borg (2007). As the objective of the research is to analyze the Accountancy students’ motivation to take Enade in 2015, the data were collected during the months before the test - September, October and November 2015 - concluded on the day before the application of Enade, that is, November 21st. In total, 1,149 answers were obtained, 67 of which were excluded because they were incomplete or because the respondents did not accept to participate in the research, or because they referred to students from other courses. The final, non-probabilistic sample consisted of 1,082 answers.

The Kolmogorov-Smirnov test revealed that the data had no normal distribution. Thus, in order to evaluate the existence of statistical differences in the Accountancy students’ motivation to take Enade, with and without the provision of extrinsic motivation mechanisms, the non-parametric Mann-Whitney and Wilcoxon tests were used, whose premises were complied with.

The Wilcoxon test is used to compare population means in paired samples to support the level of significance of possible paired differences (groups) for the variables tested, considering the population median (Fávero, Belfiore, Silva & Chan, 2009). Thus, the test was used to ascertain the difference in the students' levels of motivation to take Enem and Enade (Table 3), as well as to verify the level of motivation for Enade, with and without the possibilities of using the score in graduate studies, public exams, Proficiency Exams and registration of the degree (Table 6). Table 1 shows the variables used in the tests.

Table 1

Description of the variables used in the tests of means

Variable	Description	Measuring
ENEM	Refers to the student's level of motivation to participate in Enem.	Continuous, from zero to ten
Course	Refers to the student's level of motivation to take the Accountancy course.	Continuous, from zero to ten
ENADE 2015	Refers to the student's level of motivation to participate in the Enade 2015.	Continuous, from zero to ten
ORG-ACAD	Refers to the academic organization of the institution the research participant is affiliated with.	Binary, in which 1 corresponds to the public institution and 0 to the private institution
CAT-ADM	Refers to the administrative category of the institution the research participant is affiliated with.	Binary, in which 1 corresponds to the university and 0 to schools and university centers.
Region	Refers to the region where the institution the research participant is affiliated with is located.	Binary, in which 1 corresponds to the South and Southeast and 0 to the North, Northeast and Central-West
Graduate Admission	Refers to the student's motivation level to participate in Enade if the score were used to be admitted to a graduate program.	Continuous, from zero to ten
Public Exams	Refers to the student's motivation level to participate in Enade if the score were used in public exams.	Continuous, from zero to ten
Cfc Exam	Refers to the student's motivation level to participate in Enade if the score were used in the Proficiency Exam promoted by the Federal Accounting Council (CFC).	Continuous, from zero to ten
Degree	Refers to the student's motivation level to participate in Enade if the score were registered at the back of the degree.	Continuous, from zero to ten

Source: research data.

The Mann-Whitney test was used to test two independent samples, involving the academic organization (public and private); the administrative category (university versus schools/university centers) and the region (South and Southeast versus North, Northeast and Central-West). In other words, as a complement, the test permitted checking for significant differences among the students' motivation levels to take Enade.

The statistical hypotheses formulated to be tested were:

- Null hypothesis (H0): there is no significant difference among the Accountancy students' motivation for the research variables and groups.
- Alternative hypothesis (H1): a significant difference exists among the Accountancy students' motivation for the research variables and groups.

5. Analysis and Discussion of the Results

The sample of 1,082 responses consisted of students from 122 Brazilian educational institutions, being 45.3% of HEI students from the Southeast; 29.2% South; 9.7% Northeast; 9.2% Central-West and 5% North. Seventy-three percent of the students studied at public institutions and 74.1% were affiliated with universities.

It was also observed that 61.2% of respondents were female; 60.2% were up to 25 years of age; 84.5% attended from the fifth to the tenth grade; 79.6% studied in the evening period; 79.2% were active in the job market; 23.8% had already participated or participated in academic activities (scientific initiation, tutorial teaching program, monitoring or junior company); and 70.8% had taken the Enem, even if it had not been used for course admission purposes.

In summary, the predominant profile of the sample was: students with up to 25 years of age, linked to the job market, attending the second half of the course, in the evening period, in public universities in the South and Southeast and who participated in Enem.

Table 2 shows the measures of central trend, mean, median, mode and standard deviation related to the respondents' level of motivation to take the Enem, to take the Accountancy course and to take Enade in 2015.

Table 2

Central trend measures – Motivation for the course, Enem and Enade 2015

	N	Mean	Median	Mode	Standard Deviation
ENEM	815	7.31	8	8	2.863
Course	1065	7.710	8	8	2.066
ENADE 2015	1074	5.818	7	8	3.081

Obs.: research data

According to Table 2, the students' average motivation to take the course was about 7.7 points (scale from zero to 10 points), slightly higher than their mean motivation to take the Enem (7.2 points). The data also reveal that both the mean and the median motivation to take Enade are lower than the motivation for Enem. This is an important observation as, when they took Enem, they could be motivated to perform well in order to compete for a place in higher education at a public institution or to grants/funding at private institutions. To assess whether the difference is significant, however, the Wilcoxon test was applied, displayed in Table 3.

Table 3

Test of medians – Enem versus Enade 2015

Variable (Motivation)	N	Mean ranks	Z statistics	P-Value
ENADE 2015 < ENEM	404	280.41		
ENADE 2015 > ENEM	146	261.92	-10.081	0
ENADE 2015 = ENEM	263	-		

Obs.: research data

The test confirms that, in fact, the students' motivation levels to take Enade are lower than their motivation to take Enem (p-value = 0.000). In this case, the null hypothesis was rejected, that is, a difference exists between the Accountancy students' motivation for the Enem and Enade variables. The findings strengthen the report by Guimarães and Bzuneck (2008), who affirm that extrinsically motivated students need external stimuli to perform a task, such as scores, awards and rewards. In this respect, Leitão *et al.* (2010) already appointed the students' lack of incentives to take Enade, that is, the use of rewards could increase the students' motivation, in line with the Ministry of Education's expectations (Cameron, 2001).

In Table 4, Mann-Whitney's non-parametric test is presented for the students' motivation to take Enade 2015, considering the variables ORG-ACAD (academic organization), CAT-ADM (administrative category) and region.

Table 4

Test of medians: analysis by institutions

Variables	N	Mean ranks	P-Value
ORG-ACAD			
Public HEI	784	513,53	0,004
Private HEI	284	575,18	
CAT-ADM			
Universities	795	584,17	0,001
Schools and University Centers	263	511,42	
REGION			
South and Southeast	801	516,60	0,015
North, Northeast and Central-West	257	569,71	

Obs.: research data.

The test results were significant at 5% for all groups tested, rejecting the null hypothesis, that is, for the investigated groups, there is a significant difference among the motivation levels of the Accountancy students to take the Enade.

The students of the private institutions have higher levels of motivation for Enade than the students of public institutions. As emphasized by Brito (2008), in most cases, the indicators calculated based on Enade are used to allocate resources and to promote the institution's image. This may explain the fact that private colleges have more actions to raise their students' awareness and motivate them (Silva, Miranda & Freitas, 2017), a factor that justifies the students' higher average motivation at private than at public institutions.

Universities also presented higher averages than university centers and schools. It is important to emphasize that university students also presented higher scores than the other institutions in previous editions of Enade, according to studies by Santos (2012) and Ferreira (2015). It was also interesting to note that students from the North, Northeast and Central-West were more motivated than those from the South and Southeast for the Enade. In the previous editions of Enade, however, the South and Southeast presented higher average scores than the other regions (Santos, 2012; Ferreira, 2015).

The differences presented in Table 4 are supported by the words of Martinelli and Bartholomeu (2007), which establish that motivation is a multifaceted phenomenon that varies according to the needs, motives and incentives of each human being.

On the other hand, Dias Sobrinho (2010) understands that this exam not only evaluates the higher education system, but also ends up dictating behaviors of the agents involved. In this sense, to verify if the supply of stimuli would increase the motivation to perform Enade, the central trend measures for the students' perceptions are presented in Table 5 in view of the investigated possibilities.

Table 5

Central trend measures - use of Enade in the student's career

Use of Enade score in:	N	Mean	Median	Mode	Standard deviation
Graduate Admission	1073	8.325	9	10	2.357
Public Exams	1074	8.919	10	10	2.002
Cfc Exam	1075	8.751	10	10	2.080
Degree	1072	8.100	9	10	2.630

Obs.: research data.

It can be observed that the means and medians related to the use of the Enade (graduate admission, public exams, CFC exam and degree - Table 5) were all numerically higher than the motivation for Enade 2015 (Table 2). The averages rose from 5,818 to values superior to 8 points; the median rose from 7 to 9 in two situations and 10 in two others. The results corroborate Leitão *et al.* (2010) and Pederneiras *et al.* (2011), in that the students do not feel encouraged/motivated to take Enade. In this sense, the increase of external stimuli ends up having a positive influence on the students' level of motivation.

In Table 6, using the Wilcoxon test, the significance of these differences is shown.

Table 6

Test of medians - Motivation ENADE with and without possibilities to use to score

Variable (Motivation)	N	Mean ranks	Z statistics	P-Value
Graduate admission < ENADE 2015	68	259,64		
Graduate admission > ENADE 2015	782	439,92	-22,849	0,000
Graduate admission = ENADE 2015	218	-		
Public exams < ENADE 2015	48	306,18		
Public exams > ENADE 2015	855	460,19	-24,206	0,000
Public exams = ENADE 2015	166	-		
CFC exam < ENADE 2015	47	250,32		
CFC exam > ENADE 2015	843	456,38	-24,364	0,000
CFC exam = ENADE 2015	180	-		
Degree < ENADE 2015	78	310,69		
Degree > ENADE 2015	752	426,37	-21,505	0,000
Degree = ENADE 2015	237	-		

Obs.: research data.

In Table 6, it is clear that all possibilities of using the Enade score significantly raise students' motivation level (p -value = 0.000). These results permit rejecting the null hypothesis proposed for the statistical tests, in view of a significant difference between the level of motivation for the variables proposed in taking Enade, involving the use or not of the score for graduate admission, public exams, the CFC exam and registration in the degree.

It should also be recalled that the increase in motivation can also entail positive effects for the performance of students seeking external rewards (Cameron, 2001; Guimarães, 2009). Cameron (2001) argues that students should receive incentives to perform tasks they take little interest in. Thus, it is possible that introducing the use of the Enade score for graduate admission and its registration in the degree - as the Minister of Education proposed in 2015 (Cazarré, 2015) - can encourage the students and, consequently, increase the mean scores in general.

Table 7 presents the synthesis of the non-parametric Mann-Whitney test related to student motivation by: academic organization; administrative category and region in the event of registration of the Enade score on the degree and its use for graduate admission, in public exams and in the CFC exam.

Table 7

test of medians – P-Value of motivations for the use of the Enade score

Variables	Graduate education	Public exams	CFC exam	Degree
Academic Organization				
Public HEI	0,021	0,534	0,264	0,178
Private HEI				
Administrative Category				
Universities	0,008	0,701	0,036	0,127
Schools/Univ.C.				
Region				
South and Southeast	0,021	0,512	0,554	0,676
NO, NE and CW				

Source: research data.

It is important to recall that the students' motivation levels to take Enade 2015 were statistically different by academic organization, by administrative category and by region (Table 4). Given the possibilities of using the score in future situations, however, this difference tends to disappear, that is, the motivation ceases to be a variable that differs by academic organization, administrative category or region. In other words, the differences appear consistently only regarding the use of the score for admission to graduate programs, which is reasonable as only a small percentage of students move on to graduate education.

This means that the use of these motivational stimuli would contribute to make the results of the Enade more accurate, because the students would be more interested in taking the test. In other words, the variable motivation would affect the students' performance differences less. The Accountancy students' level of motivation to take Enade with the stimulus of rewards, if put in practice, may influence their posture when taking the test and, consequently, actively engage them in the learning process, taking the form of results that are more reliable and closer to the concrete reality, reducing the possibilities of "boycotts" (Guimarães & Boruchovith, 2004).

Finally, the students were asked if participation in this research could somehow influence their levels of motivation to take Enade 2015. It was verified that 23.1% of the participants did not answer this question. Of the valid answers, 30.7% answered positively, because the research revealed possibilities they had not imagined.

6. Final Considerations

The objective of this study was to identify the Accountancy students' levels of motivation to take the Enade with and without the supply of extrinsic motivation mechanisms.

The results showed that the students' levels of motivation to take Enade 2015 are statistically inferior to their motivation to take the Accountancy course, and also inferior to their motivation when they took the Enem. The motivation is even lower at public institutions in the South and Southeast.

The results also pointed out that the supply of stimuli as a reward for these students, whether in the form of the registration of the score on the degree, use of the degree for admission to graduate education, use of the degree for public examinations or for the CFC examination positively affects the intention (motivation) to take Enade.

These results reaffirm that the use of incentives and/or rewards can enhance motivation and performance when offered under appropriate conditions (Cameron, 2001). Nevertheless, it is important to recognize the importance of intrinsic motivation in the learning process, as suggested in the cognitive assessment theory. Rewards are offered as incentives for behaviors that do not arise spontaneously. In this

case, these rewards are perceived as behavioral control and can affect and/or diminish intrinsic motivation. The adoption of incentives should be carefully considered, not restricting student motivation to rewards, but promoting educational situations that stimulate intrinsic motivation (Guimarães, 2009).

The announcement by the Minister of Education at the end of the year 2015, referring to the inclusion of the Enade score in the student's curriculum and its use for admission to graduate courses, according to the results found in this research, could increase the students' levels of extrinsic motivation. Consequently, the levels of motivation could become more homogenous among different regions and public/private educational institutions or universities/schools and university centers. By homogenizing the levels of motivation for the test, there could also be an increase in the average scores of institutions due to the absence of boycotts. In short, the assessment system would also become more accurate in terms of evaluation purposes.

Therefore, the results of this research indicate new possibilities for improvement of the current evaluation system (Sinaes), considering that any and all assessment tools need to adapt and follow the complex and dynamic evolution of society. This possibility of "enhancement" of Enade, one of the evaluation axes of Sinaes, can not only present a model that reflects more reliable results of the Brazilian higher education reality, but also contribute to the quality of teaching, as there will be a concrete stimulus not only to take Enade. It could also arouse the students' concern to do their course well, to take a good test and achieve what motivated them (curriculum, graduate education, etc.). These stimuli can create a "cascade effect", in the sense that, when they feel motivated by an end, they raise several positive points in the course of this trajectory.

The contributions of this study include the disclosure of undergraduate Accountancy students' level of extrinsic motivation to take a student performance assessment exam with the supply of incentives. These results serve as an alert to public managers related to education concerning the relevance of including reinforcements and external motivational factors that may contribute to the students' involvement in the learning process. In addition, the students participating in the research may also benefit, as this survey preceded the exam and almost one-third of the respondents admitted that their participation in the research could positively change their motivation to take ENADE 2015.

It is important to emphasize that, in this study, the non-probabilistic sample was used, exclusively with Accountancy students, which does not permit generalizations of the results, therefore constituting a limitation. This aspect does not restrict the relevance of the findings evidenced in the research though, which can be compared with other studies. For future research, the level of motivation of the students participating in the research could be compared with the performance of the HEIs these students are affiliated with, as well as the replication of the study in other areas.

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