

Teacher profile in private higher education and Enade performance

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Abstract

The article aims to relate characteristics of the teacher profile in higher education to the academic performance of students from private higher education institutions, measured by the average of the concept received in the National Student Performance Exam. This is a descriptive study, using data from said exam (2016 and 2017) and microdata from teachers and higher education institutions (2016 and 2017) from the National Institute of Educational Studies and Research Anísio Teixeira, in which we verified the impact of several variables in the average of the National Student Performance Exam by institution. Multiple linear regression was applied, from which it was found that the most significant positive factors are related to the education level of teachers. The results also indicated that the teachers' work regime did not prove to be a variable that adds value to the students' performance in the aforementioned exam.

Keywords

Teaching. Enade. Higher education institutions.

O perfil docente no ensino superior privado e o desempenho no Enade

Resumo

O artigo tem por objetivo relacionar características do perfil da docência no ensino superior ao desempenho acadêmico dos estudantes de instituições de ensino superior privadas, medido pela média do conceito recebido no Exame Nacional de Desempenho dos Estudantes. Trata-se de estudo descritivo, utilizando dados do referido exame (2016 e 2017) e microdados dos docentes e instituições de ensino superior (2016 e 2017) do Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, em que se verificou o impacto de diversas variáveis na média do Exame Nacional de Desempenho dos Estudantes por instituição. Foi aplicada uma regressão linear múltipla, a partir da qual se encontrou que os fatores positivos mais significantes estão relacionados ao grau de escolaridade da docência. Os resultados indicaram também que o regime de trabalho dos docentes não demonstrou ser uma variável que agrega valor ao desempenho dos estudantes no mencionado exame.

Palavras-chave

Docência. Enade. Instituições de ensino superior.

El perfil docente em educación superior privada y el desempeño em el Enade

Resumen

El artículo tiene como objetivo relacionar características del perfil docente en la educación superior con el rendimiento académico de los estudiantes de instituciones privadas de educación superior, medido por el promedio del concepto recibido en el Examen Nacional de Desempeño del Estudiante. Se trata de un estudio descriptivo, utilizando datos de dicho examen (2016 y 2017) y microdatos de docentes e instituciones de educación superior (2016 y 2017) del Instituto Nacional de Estudios e Investigaciones Educativas Anísio Teixeira, en el que se analiza el impacto de varias variables en la promedio del Examen Nacional de Desempeño de Estudiantes por institución. Se aplicó regresión lineal múltiple, a partir de la cual se encontró que los factores positivos más significativos están relacionados con el grado de docencia. Los resultados también indicaron que el régimen de trabajo de los docentes no resultó ser una variable que agregue valor al desempeño de los estudiantes en el examen mencionado.

Palabras clave

Docencia. Enade. Instituciones de educación superior.

1 Introduction

Students' performance, measured quantitatively, may be associated with several factors found in the literature: the student themselves (due to cognitive and social factors), the institution and the teachers.

Understanding teacher attributes in students' performance is relevant for education, since through it one can better understand how the profile of a teacher can be related to the quality of teaching and the transmission and absorption of knowledge. From a management point of view, this understanding is relevant to administrators of private higher education institutions, since it points out variables on which human resources management should focus.

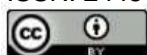
This research aims to present a descriptive study that relates characteristics of teacher profile in higher education to the academic performance of students from private higher education institutions (HEIs), measured by the average grade at the National Student Performance Exam (Enade, in Portuguese) per institution. To achieve the results, we used data from Enade (2016 and 2017) and microdata of teachers and HEIs (2016 and 2017) from the National Institute of Educational Studies and Research Anísio Teixeira (Inep, in Portuguese). Some variables of the HEIs were also included, in order to capture some influence of the institution.

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Regarding the theme, we can mention the studies mentioned subsequently, which attribute part of the students' performance to the characteristics of teachers. Miranda (2011) used a questionnaire based on the factors that characterize the qualification of teachers with the coordinators of the Accounting Sciences course of 218 institutions. The Enade score was used as measurement of the students' academic performance. The qualification factors of the teachers taken into account were: academic qualification (teacher's preparation for research), professional qualification (connection of the teacher with professional practices existing in the market), and pedagogical qualification (preparation for teaching practice). Thus, the author researched the relationship between student performance and teacher qualification in Accounting Sciences courses in Brazil. In conclusion, Miranda (2011) pointed out that the students who performed best in Enade were those who had the teachers with the best qualification levels. Specifically, academic qualification is the only one that had a significantly positive relationship in the Enade score. According to the author, the HEIs should invest in their faculty's education, to boost the academic results of their students. On the other hand, the pedagogical qualification, contrary to what the literature mentioned, did not show a significant relationship in the Enade score and, therefore, in the students' academic performance.

Miranda *et al.* (2015) mapped variables present in the literature that affect the academic performance of students in the business area (Administration, Accounting Sciences and Economics). As a result, the authors concluded that there are four variables of academic training of the faculty that significantly influence the students' academic performance: exclusive dedication, education level (*stricto sensu*), relevant publications, and teaching and learning strategies or methods. The teaching strategy would have a higher degree of significance in students' performance because it appears more frequently in the studies they reviewed. According to Miranda *et al.* (2015), there are few studies on the relationship between academic performance and faculty, which would make it difficult to establish trends in relation to the behavior and influence of these variables. However, they indicate that the teacher has a significant role in the teaching and learning process, as well as their planning in teaching practice. The authors also quote other scholars, such as Glewwe *et al.* (2011) and Pil and Leana (2009), who found a relationship between academic performance and

faculty, mentioning specific variables about teachers, such as: education level, pedagogical training, professional experience, work regime, among others.

Brito (2015) begins the study by mentioning the impact of the quantitative growth of undergraduate courses in Brazil and questioning their quality, since quality higher education is related to the growth of a country's economy. The study reports that this expansion of higher education may have enabled low-quality education and points out that knowing the influence of the resources that are made available to higher education is extremely important for the teaching and learning process. Based on this context, Brito (2015) conducted a study in the teaching of Administration, which had a significant expansion, and verified the relationship between student performance and education level, in addition to working conditions of the teaching staff of the institution. The objective was to determine how the characteristics of the faculty at an HEI influenced the performance of students who completed the Administration courses at Enade. He study used microdata from Enade and the Census of Higher Education (both from 2012) from different public and private HEIs in Brazil. The results showed that the education level of the faculty, the number of teachers per course and the volume of courses offered by the HEI have a significant impact on student performance. The proportion of professors with doctorates has a positive impact on student performance and the exclusive dedication regime of the faculty has a positive and relevant impact on public HEIs.

Ferreira (2015) conducted a study to evaluate the students of Accounting Sciences courses in Brazil, in view of the increase in availability in the number of courses and spots offered, as well as the change in the Accounting standard in Brazil. Ferreira (2015) mentions that the qualification of the faculty to train this new student profile presents itself as a challenge. The research confirmed that the academic performance of university students is related to their results in Enade and that this performance is influenced by several variables, one of which is the faculty. In the results, the study found positive correlation between the academic qualification of the faculty and students' academic performance, that is, the more teachers with a master's or doctorate degree, the better the students' academic performance. The author also mentions that the university students themselves report that the

characteristics of the HEIs and their faculty are extremely important for a good result in Enade.

Souza and Moura (2017), in their study, aimed to evaluate academic performance in Enade of Administration students who graduated from public HEIs. To carry out the study, they used multiple linear regression. Corroborating what the literature has been showing, the results obtained by the authors showed that the performance of a student is more influenced by their previous education than by the educational resources to which they are exposed, however, despite the lower relevance of educational factors, they indicate that the percentage of teachers with doctorates and their work regime are relevant to the performance of university students. Souza and Moura (2017) indicate that, regarding the Administration course, increasing the requirements of public policies concerning the parameters of didactic-pedagogical organization, teacher training, partial or full work regime will have positive results in students' performance in Enade.

The data used in this research are from Inep, which is a federal institution focused on economic and social development through performance in educational policies. Inep devises Enade and conducts research, among them, the Census of Higher Education.

The Enade grade is used in this study as a measure to quantify student performance. Briefly, the Enade grade is an indicator that measures the quality of the institutions' courses, through an examination performed by at least two students graduating from the courses (INEP, 2018).

The data regarding teachers and institutions are contained in the Census of Higher Education and regard the lowest level of data disaggregation about teachers and institutions in Inep's research. Inep's microdata reveal details of teaching and HEI, as well as of the students, which go far beyond what was used for this study.

2 Methodology

As for methodological procedures, the research is quite accurate. Since it is a descriptive study and uses objective parameters, the results can be easily reproduced.

All the necessary data were obtained through the Inep website: the Enade grades from 2016 (INEP, 2017) and 2017 (INEP, 2018) and the microdata from the Higher Education Census of 2016 (INEP, 2017) and 2017 (INEP, 2018). As the objective is to evaluate the relevance of characteristics in the teacher profile of private HEIs, it was necessary to aggregate the data by private institution.

The researched quantitatives were as follows: for the year 2016, 811 institutions, with 134 university centers, 589 colleges and 88 universities; for 2017, there were 1,226 institutions, with 175 university centers, 958 colleges and 93 universities. Therefore, the regression with the two years combined was done with 2,037 records, among them 309 referring to university centers, 1,547 referring to colleges and 181 referring to universities. Obviously, many institutions are duplicated in regression, because what differentiates one record from another, for the same institution, is the year to which those data refer. Thus, a record in the regression refers to the data of the pair "institution, year".

For the Enade grade, which is the variable dependent on the analysis, we used the average of the (continuous) Enade grade of the courses that are part of each institution. This grouping was based on the HEI code.

In relation to microdata, among the various types of existing variables, only those belonging to teacher characteristics were considered at this point. Initially, teachers who belonged to institutions that fell into administrative categories 4 and 5 were separated, according to the Inep code, i.e., teachers from for-profit and nonprofit private institutions. Since the available variables refer to each teacher, it was again necessary to create a grouping of teachers per institution. Thus, the independent variables chosen, summed up by HEI, were as follows: percentage of teachers in practice; percentage of teachers with master's degrees; percentage of professors with doctorates; percentage of full-time teachers; average age of teachers; the existence of disabled teachers; percentage of teachers who work in distance learning courses; percentage of teachers working in extension activities; percentage of teachers working

in management, planning and evaluation activities; percentage of teachers working in teaching activities in in-person undergraduate courses; percentage of teachers working in teaching activities in in-person *stricto sensu* graduate courses; percentage of teachers who work in research within the scope of HEI projects and programs; and percentage of teachers who have a research grant. Except for the variable that indicates whether there are disabled teachers, which is a dummy variable, all other variables are continuous and quantitative.

Other dummy variables from the HEI themselves were also considered as factors that could explain the performance in Enade that did not come from the teacher profile. From the Inep microdata, the following variables were obtained regarding the institutions: academic organization (a dummy for each type of organization – university, university center or college); whether HEI libraries have access to the Coordination for the Improvement of Higher Education Personnel (Capes, in Portuguese) Journal Portal; whether HEI libraries have access to other licensed or purchased databases; and whether HEI libraries offer internet services.

The information from the 2016 Census of Higher Education was used as explanatory variables for the 2016 Enade average, as well as the 2017 information. We decided to use the two years together in the regression to obtain more robust results, which were stable over at least two years. Regression for one year could reveal specific characteristics only for a given year. Ideally, as a suggestion for comparisons in future research, one could consider even longer time intervals.

With all variables, a multiple linear regression was performed in order to verify how each variable is associated with the average Enade grade in each institution. The analysis of regression coefficients allows us to understand how an increase or decrease in each variable would produce results in the Enade grade.

Source: The authors (2019). provides a summary of all the variables involved in the regression. Each variable concerns information by private HEIs and by year (2016 or 2017).

Chart 1 – Linear regression variables

Variable Code	Description	Type
media.enade	Dependent variable, average of Enade grade by HEI	Quantitative
pct.ex	Percentage of teachers in office	Quantitative
pct.mest	Percentage of teachers with master's degrees	Quantitative
pct.dr	Percentage of teachers with doctorates	Quantitative
pct.regime.t.integral	Percentage of teachers with full-time work regimes	Quantitative
idade.media	Average age of teachers	Quantitative
def	Existence of disabled teachers	Dummy
pct.atu.ead	Percentage of teachers working in distance learning courses	Quantitative
pct.atu.extensao	Percentage of teachers working in extension activities	Quantitative
pct.atu.gestao	Percentage of teachers working in management, planning and evaluation activities	Quantitative
pct.atu.grad.presencial	Percentage of teachers working in teaching activities in in-person undergraduate courses	Quantitative
pct.atu.strictu.pres	Percentage of teachers working in a teaching activity in in-person <i>stricto sensu</i> graduate courses	Quantitative
pct.atu.pesquisa	Percentage of teachers working in research within the scope of HEI projects and programs	Quantitative
pct.bolsa.pesquisa	Percentage of teachers who have a research grant	Quantitative
org.acad.cu	Whether it's a university center	Dummy
org.acad.fac	Whether it's a college	Dummy
bib.portal.capes	Whether HEI libraries have access to the Capes Journal Portal	Dummy
bib.outras.bases	Whether HEI libraries have access to other licensed or purchased databases	Dummy
bib.servico.internet	Whether HEI libraries offer internet services	Dummy

Source: The authors (2019).

With the exception of the average age of teachers, all independent variables are in a range between 0 and 1, considering that dummy variables (false/true) can be mapped as 0 or 1. For this reason, the variable representative of average age was normalized in the interval between 0 and 1. Thus, the final regression considers data that are located on the same scale, so that the coefficients can be compared directly.

To reach the necessary database, only information contained in the three data sources was used, i.e., institutions that were present in the Enade data and that were present in both the microdata of the HEI and those of the teachers.

3 Results and discussion

In a preliminary analysis of the data, aggregated by year **Erro! Fonte de referência não encontrada.** some characteristics can be observed.

Table 1 – Summary of variables

Variable	2016			2017		
	Average	Minimum	Maximum	Average	Minimum	Maximum
media.enade	2.16	0.00	5.00	2.09	0.00	4.80
pct.ex	98%	40%	100%	98%	58%	100%
pct.mest	48%	10%	87%	50%	0%	100%
pct.dr	18%	0%	84%	18%	0%	95%
pct.regime.t.integral	22%	0%	93%	20%	0%	100%
idade.media	42.1	33.7	57.1	43.2	33.6	61.1
def	41%*	-	-	33%*	-	-
pct.atu.ead	2%	0%	96%	2%	0%	100%
pct.atu.extensao	27%	0%	100%	26%	0%	100%
pct.atu.gestao	22%	0%	100%	23%	0%	100%
pct.atu.grad.presencial	96%	29%	100%	97%	0%	100%
pct.atu.strictu.pres	3%	0%	84%	3%	0%	100%
pct.atu.pesquisa	18%	0%	100%	15%	0%	100%
pct.bolsa.pesquisa	2%	0%	91%	2%	0%	99%
org.acad.cu	17%*	-	-	14%*	-	-
org.acad.fac	73%*	-	-	78%*	-	-
bib.portal.capes	39%*	-	-	40%*	-	-
bib.outras.bases	66%*	-	-	67%*	-	-
bib.servico.internet	95%*	-	-	95%*	-	-

* Proportion of HEIs that meet the True value (1) of the variable.

Source: The authors (2019).

It can be verified that the average of part of the variables remained unchanged or had little variation between one year and the other. This is the case of pct.ex, pct.mest, pct.dr, pct.regime.t.integral, idade.media, pct.atu.ead, pct.atu.extensao, pct.atu.gestao, pct.atu.grad.presencial, pct.atu.strictu.pres, pct.bolsa.pesquisa, bib.portal.capes, bib.outras.bases and bib.servico.internet.

The Institutions' Enade average score (calculated as the average of the Enade of the courses per institution) had a small decrease between one year and the other. The proportion of HEIs with teachers with any disability decreased from 41% to 33%. Other data reveal that the institutions had, on average, 18% of the teaching staff working in research in 2016, but had 15% in 2017. It can also be verified that there was a decrease in the proportion of university centers, as opposed to the proportion of colleges. These differences are important because they will be within the same

regression and may be determinant to reveal reasons for performance changes in Enade or not.

Other characteristics that can be mentioned are: 1) the lowest proportion of teachers in practice found in an HEI increased from 40% to 58%; 2) regarding the level of education, the data are mixed. The lowest percentage of master teachers found in an HEI decreased from 10% to 0%, while the highest increased from 87% to 100%. At the same time, in the case of doctors, the maximum proportion increased from 84% to 95%; 3) the maximum proportion found of full-time teachers in 2016 was 93%, reaching 100% in the following year; 4) the HEI with a higher average age among teachers increased between the two years; 5) the institution with the maximum percentage found of teachers working in distance education rose from 96% to 100%; 6) the minimum percentage of teachers working in teaching activities in in-person undergraduate courses found in 2016 was 29%, while this value changed significantly, reaching 0% in 2017; 7) the maximum percentage of teachers working in in-person *stricto sensu* graduate courses found for an institution had been 84%, a figure that increased to 100% in the following year; and, finally, 8) the maximum proportion of teachers who had a research grant in an HEI was 91%, whereas in 2017 there was an HEI in which 99% of the professors had this grant.

It is worth remembering that this descriptive information is valid for the institutions that had Inep data made available at the same time in the three categories necessary for the research: Enade grade, microdata of teachers and microdata of the institution.

With all the data in a single database, before running the regression, a multicollinearity test was carried out, in order to verify if there were variables that could bring in essence the same information and end up generating an unstable regression, which could lead to incorrect results. For this, we calculated the variance inflation factor (VIF) of the regressors. As a general rule, it can be considered that a VIF above 5 indicates the presence of multicollinearity. For the variables in question, the maximum VIF found was 3.54. Thus, it was possible to follow through with the desired regression.

Then, the regression was carried out and the research results were properly analyzed. The coefficients found, as well as the information regarding their significance, can be found in Source: The authors (2019)..

Table 2 – Regression results

Variable	Coefficient	T-statistic
Intercepto	2.11***	6.42
pct.ex	-0.31	-0.65
pct.mest	0.95***	8.24
pct.dr	1.44***	9.97
pct.regime.t.integral	-0.43***	-4.03
idade.media	-0.32**	-2.89
def	0.15***	4.53
pct.atu.ead	-0.32	-1.31
pct.atu.extensao	-0.13*	-2.17
pct.atu.gestao	-0.02	-0.32
pct.atu.grad.presencial	-0.17	-0.48
pct.atu.strictu.pres	0.21	1.12
pct.atu.pesquisa	0.18*	2.16
pct.bolsa.pesquisa	-0.18	-0.81
org.acad.cu	-0.03	-0.42
org.acad.fac	-0.19**	-2.88
bib.portal.capes	-0.02	-0.75
bib.outras.bases	0.03	0.84
bib.servico.internet	0.04	0.63

$R^2 = 0.12$ and f-statistic = 15.05 (p-value < 0.000001)

* significant to 5%

** significant to 1%

*** significant to 0,1%

Source: The authors (2019).

The first result to be verified is that the R^2 is low, which indicates that, although the selected variables explain 12% of the variance of the Enade average, there are other variables that explain the rest of the variance, such as factors arising from the student themselves (cognitive and social factors), other factors of the institutions and other attributes of teaching not covered in this model. However, the F statistic also indicates that this model is generally significant, which shows that the hypothesis that all coefficients are equal to zero is rejected. In other words, the variables in the model (especially the significant ones) are explanatory to the Enade grade, but partially explain the dependent variable, and other complementary information is needed.

Since all variables are in the range between 0 and 1, it is possible to make a direct comparison of the magnitude of the coefficients. Thus, in terms of sensitivity, the most sensitive variables, that is, those of greater magnitude in absolute values, are those related to education level. They are the ones that produce the greatest effects on the

Enade grade in the context of the study. The most irrelevant, taking into account not only the coefficient, but together with the t-statistic, seems to be the one that relates the percentage of teachers who work in management and planning (pct.atu.gestao).

We observe that, among the variables listed and associated with the Enade average, there is only one that is significant and belongs to the HEI, which is the fact that the HEI is a college, which contributes negatively to performance in Enade, that is, according to the data analyzed, being a college is associated with a decrease of 0.19 in the institution's Enade average. All other significant variables relate to the teacher profile.

The most significant variables are related to the teachers' education level. The proportion of professors with master's and doctorate degrees is positively related to the institution's average in Enade, a result that is expected, since in the literature there are results in this same direction (such as those mentioned in section 2). Because the coefficient of "pct.mest" is 0.95, this means that on average an increase of 10% in the proportion of masters would be related to an increase of 0.095 in the Enade average. With the presence of doctors, this effect is even stronger. A positive variation of 10% in the proportion of doctors would be related to a variation of 0.14 in the HEI's average in Enade.

As an illustration and for better understanding of the variations produced in the Enade variable mentioned above, considering the years 2016 and 2017 studied, a positive increase of 0.1 in the average Enade grade of an HEI that is in the 50th percentile would shift this institution to the 56th percentile (approximately), greatly improving its position in relation to the others.

After that, the third most significant effect is a surprising social factor: the presence of disabled teachers. The existence of disabled teachers alone accounted, in the regression, for an increase of 0.15 in the Enade average. In order to understand more precisely the reason for this finding, confirmatory, more in-depth studies on this factor are suggested for future research.

The next variable is related to the teacher's work regime. This variable indicates that the more full-time working teachers there are, the less this contributes to the Enade average. This result is revealed to be contrary to what was expected, since we expected that the more time a teacher dedicated to an HEI, the better quality of teaching and the absorption of knowledge by the students would be, since the teachers would be more

available to students; this result also differs from that found by Brito (2015). An explanation for this divergence is possibly linked to the scope and particular limitations of each study (all students, only Administration students, study interval, public, private or both universities, among others). By the coefficient found (-0.43), a 10% decrease in the proportion of full-time teachers would lead to an increase of 0.043 in the average Enade score of private HEIs. We can suggest a hypothesis in which perhaps the length of time dedicated to an institution may be linked to the workload. Teachers submitted to work regimes with longer dedication could also be subjected to a disproportionately higher workload, which could influence the quality of teaching.

Average age of teachers is another factor significantly related to performance in Enade. The coefficient indicated was calculated for the normalized average age variable. After denormalizing, the coefficient is -0.0116 for each year. That is, a positive variation of 5 years in the average age of teachers in the institutions would indicate a negative variation of 0.058 in the performance of institutions in Enade. It is a small variation, but statistically significant, according to the model. This result, in a way, is also contrary to what was expected, given that it would be expected that HEIs with more experienced teachers would be better qualified to lead students to higher grades in Enade. In this case, a possible explanation for this is linked to characteristics related to age, such as motivation. Younger professionals tend to be more motivated, though less experienced, which is possibly an attribute that produces some impact on students.

Finally, the last two variables – less significant – but still with significance at 5%, "pct.atu.extensao" and "pct.atu.pesquisa", whose impacts are opposite. The coefficient of "pct.atu.extensao" (-0.13) indicates an inverse relationship with the Enade average, while that of "pct.atu.pesquisa" (0.18) constitutes a positive relationship. The magnitude of the coefficients, however, is small. In any case, the result indicates that, with significance to 5%, decreases in the proportion of teachers working in extension activities, as well as increases in the proportion of teachers working in research within the scope of HEI projects, would lead to increases in the institutions' Enade average. The other variables are not significant, not even at 10%. Nevertheless, it is worth mentioning subsequently how the variables were related, given the context of the study.

The following variables are positively related to the Enade average: pct.atu.strictu.pres, bib.outras.bases and bib.servico.internet. That is, the proportion of

teachers who work in in-person *stricto sensu* courses and the fact that the HEI libraries have access to other databases or offer Internet services contribute positively to the Enade average.

On the other hand, the variables `pct.atu.ead`, `pct.bolsa.pesquisa`, `bib.portal.capes`, `pct.ex`, `pct.atu.grad.presencial`, `org.acad.cu` and `pct.atu.gestao` are negatively related to the dependent variable, that is, the fact that the institution is a university center, that libraries have access to the Capes Portal, the proportion of teachers who work in distance learning courses, who have a research grant, who are in office, who work in in-person undergraduate courses or who work in management, planning and evaluation activities does not add value to the performance of students in relation to institutions' average Enade grade. It is worth remembering that there is no statistical significance for the findings in these last two paragraphs.

5 Final considerations

This study sought to describe the characteristics that were associated with the performance of students in 2016 and 2017 Enade. As variables, we used the average Enade grade per institution (the average of the continuous Enade grade of each course) and attributes of the microdata of teachers and institutions, obtained through Inep. As a result, it can be verified that the most relevant factor of the teacher profile for performance in Enade is in the education level. Teacher profiles with higher education levels (master's and doctorate) brought positive contributions to the result achieved by the students at Enade. The inclusion of teachers with any disability was also positive for student performance. On the other hand, the full-time work regime of teachers was not shown to have positive effects on the Enade grade.

From an educational point of view, the results showed that factors of teacher training level tend to improve learning or knowledge retention by university students. At the same time, a social factor, such as disability, also produced effects in this direction, showing that educational policies (private or public) of social inclusion (of disabled professionals) brought positive results for teaching, which could be verified through the students' performance. Other characteristics, such as full-time dedication, dedication to extension and dedication to research, have repercussions on the quality of teaching.

Regarding management aspects, especially human resources, since we're considering private institutions, the results show that decisions made regarding teaching would have impacts on the qualification of students. One way for management to take advantage of these results is to focus on the aspects that contribute to the best performance of students. For example, providing incentives for *stricto sensu* graduate studies, including disabled professionals in the faculty, examining the relevance of the full-time regime or improving it, encouraging teachers to work in research. These are decisions that would contribute to the image of the institution as a company, since better results by students would be publicized, bringing market benefits to the institution.

It is worth mentioning that the results of this study are within a context for which it is necessary to mention some limitations. Student performance explored in this study is based on Enade and carries its methodology and its own limitations. This exam, when evaluating the student, also evaluates the institution. It is possible that some institutions and even teachers believe that good performance by students is strictly linked only to the quality of the faculty. However, the concept attributed here to "performance" may not necessarily be the best definition of HEI students' performance. The exam is carried out at the end of the year and the Census of Higher Education begins at the end of the year and data collection runs until April of the following year, which represents only a point in time, a picture of the situation, which may not adequately represent the graduating students' knowledge acquired over several years or the teacher profile over time, for example. Therefore, regression represents a point in time, not an evolution. Finally, the analyzed data refer only to the interval between 2016 and 2017, so the results portray the facts of this period.

6 References

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