A PILOT STUDY ON STUDENTS' AND LECTURER'S PERSPECTIVE ON PLAGIARISM IN HIGHER PROFESSIONAL EDUCATION IN FLANDERS

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Abstract:

The current study addressed plagiarism in higher professional education from an attitudinal perspective. In this work, plagiarism was considered from the point of view of both bachelor students and lecturers. The goal was to ascertain how plagiarism is defined and perceived by both parties, and how students and lecturers act upon plagiarism. Results showed that students – in spite of the availability of software detection tools – still lack awareness of what plagiarism entails. Although lecturers were shown to have more insight in the complexity of the topic they were found to display a rather compliant attitude toward plagiarism. These findings are supported by the low response rate for the current study: the interest in addressing plagiarism properly is lacking throughout the institution.

Hence, this pilot study yet again highlights the importance of (fighting) plagiarism. It is crucial that HEIs do not turn a blind eye and explicitly address this problem at all levels of the institution, not only because the quality of educational programs decreases when plagiarism is not dealt with, but also because the reputation of HEIs is in danger of being jeopardized.

Key words: Higher Education Institution; plagiarism; lecturers; students

1   Plagiarism in higher education

Over the past decades, cases of student plagiarism in higher education have increased substantially (Dee & Jacob, 2012). Therefore, clear academic staff guidelines for detecting and tackling plagiarism should be introduced in higher education institutions (HEIs). However, plagiarism is a concept that is not that straightforward and can be interpreted from a myriad of perspectives (Bretag, 2013). Moreover, plagiarism is not a legal term as such given that it does not per se entail a violation of copyright law (Stearns, 1992). Students and staff are often not familiar with the diverse complexities of the description of plagiarism. Hence, students enrolled in a higher education program fall into the plagiarism trap quite regularly. They plagiarize without being fully aware of their infringements of the academic integrity or without the knowledge of how misunderstandings regarding the current conventions can be evaded. In addition, higher education students are often still too little familiar with correctly citing and referencing in a text and plagiarize unintentionally. As a result, some acts of plagiarism can be merely due to ignorance.

Since the emergence of the Internet and the easiness with which students can get information combined with deteriorating ethical values of students (Gross, 2011), copy pasting (parts of) a text has become easier today. Moreover, students wrongly underestimate the importance or the severity of plagiarism and seem to trivialize and justify their and fellow students' behavior (Park, 2003). Foltynek et al. (2014) also mention the higher education students' limited awareness of the meaning of copyright

and intellectual property rights. Because there is no legal framework available for plagiarism in Belgium, the academic staff of Belgian HEIs find defining, detecting and acting upon plagiarism quite complex and time-consuming.

In order to better grasp the concept of plagiarism, the European project "Impact of policies for plagiarism in higher education across Europe" (IPPHEAE) examined the understanding of and experience in HEIs with plagiarism in 27 countries, including Belgium. This research project was funded by the Lifelong Learning Program of the EU and conducted from 2010–2013. Its main focus was to find out how plagiarism is seen in the different European HEIs participating (aimed at bachelors' and masters' degree level) and how the HEIs act upon cases of plagiarism. The most important result for Belgium was that Belgian HEIs are aware of software tools detecting plagiarism (Glendinning, 2013). Similarly, Hellaby (2011) pointed out that a growing number of HEIs are taking action against plagiarism and actively scan for plagiarized work by means of detection software. Over the last couple of years, a downward trend regarding cases of plagiarism is perceived in universities across Belgium. According to the university board, this decrease is mainly the consequence of the deterrent effect of the implementation of the software TurnItIn[1] (DeMorgen, 2013). However, research has shown that introducing a plagiarism detection instrument does not automatically imply that students will not plagiarize. Although software detection tools may help students and staff to control written work for plagiarism, Youmans (2011) found that when students are warned beforehand that the plagiarism detection tool would be applied to scan their texts this warning did not decrease the number of plagiarism cases. In a recent study, Dee and Jacob (2012) set up a field experiment in which they looked into the effect of a web-based tutorial explaining and demonstrating plagiarism on its prevalence. The tutorial led to an increase in the students' awareness and knowledge of the topic, hence suggesting that prevention and education are more effective and efficient rather than the probability of getting caught and punished.

Research has shown that staff in higher education come across acts of plagiarism at a certain point in their career (Park, 2004). However, academic staff are not likely to give priority to detecting plagiarism. Often, they are reluctant toward engaging in the administrative procedures of the HEI when taking action in denouncing acts of plagiarism (Dee & Jacob, 2012). These findings support the IPPHEAE study which unveiled that staff at Belgian HEIs lean toward a rather relaxed approach to supervising at exams and limited sanctions are inflicted upon those breaking the rules (Glendinning, 2013). What is striking is the low response rate of teaching staff and students in this European survey which implies a lack of interest from both parties. It seems fitting to conclude that Belgian HEIs are somewhat reluctant toward the topic and plagiarism appears not to be high on the priority list. Out of the 4948 participants who took the European survey (2010–2013) only 9 were Belgian. The neighboring countries scored similarly low (The Netherlands: 5 respondents, Luxembourg: 4 respondents). The overall score on the Academic Integrity Maturity Model the IPPHEAE project developed was also rather low, leaving Belgium with a ranking on this Model of 13 out of the 27 participating countries (Glendinning, 2013).

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[1]TurnItIn is an online service that detects plagiarism: the tool offers the possibility to compare texts with references and can therefore easily detect similarities with other documents.

2   Present research

Research questions

By means of a case study in one HEI, UC Leuven-Limburg, the importance attributed to plagiarism in Flemish higher professional education was considered from both students' and lecturers' perspectives. A survey was administered to students and lecturers to map their perception of and attitudes toward plagiarism. The following research questions were addressed using a quantitative approach:

- To what extent are students in HE aware of plagiarism? To what extent can any differences be attributed to students' SES and educational program?
- How tolerant are students in HE toward plagiarism? To what extent can any differences be attributed to students' SES and educational program?
- How tolerant are lecturers in HE toward plagiarism?
- How do lecturers in HE deal with acts of plagiarism?

Plagiarism definition

In the present study, plagiarism is described as defined by the Education and Examination Regulations of UC Leuven-Limburg:

> "Irregularity also includes plagiarism. Plagiarism is an irregularity which consists of copying (entirely or partially) other people's work (ideas, texts, structures, images, plans,...) literally or in a slightly modified manner without adequately citing the source. This regulation also applies to copying one's own work without citing the sources" (Education and Examination Regulations, art. 128).

Participants

For this pilot study, an Internet questionnaire on plagiarism was administered by the internal e-mail system to both lecturers and students at UC Leuven-Limburg – from bachelor programs that vary from Business Studies over Teacher Training to Social Work and Health Care – as to get insights from a variety of perspectives on plagiarism. It is striking that out of 1500 faculty members and over 15000 students only 115 lecturers and 524 students from the various educational programs actually filled out the questionnaire. Moreover, some heads of faculty seemed rather reluctant to have their staff and students participate in the inquiry.

Measures

The **lecturers' questionnaire** contained questions regarding their knowledge on the Education and Examination Regulations, on how they define and describe plagiarism, in how far they undertake action when coming across plagiarism, and regarding their attitude toward the HEI's policy concerning plagiarism. In addition, lecturers were asked to fill out their educational background, age, how long they have been working in education and in which educational program(s) they are currently active.

In the **student's questionnaire**, participants were presented with three scenarios on the perceived justice of fraudulent situations (see Appendix 1), they were queried on how they define and describe plagiarism, how they perceive action(s) undertaken by lecturers, and whether and how they undertake action to avoid plagiarism in their own work. Finally, students were asked about their educational background, age, current study year within the educational program, and how long ago they graduated from high school.

3   Results

3.1   Results Questionnaire lecturers

Sample characteristics

A total of 115 lecturers of UC Leuven-Limburg (31 men and 84 women) took part in this study. Of these participants 6 lecture in Health Care, 49 in Business Studies, 29 in Teacher Training, 19 in Social Work and 12 lecture at the Technology department. Eight lecturers hold a PhD, 15 a bachelor's and 92 a master's degree.

Questionnaire

Knowledge of the Education and Examination Regulations. Twenty-four lecturers (21%) indicated having the necessary knowledge regarding the Education and Examination Regulations, whereas 20 (17%) lecturers stated to have no knowledge of the content of the Regulations and therefore also do not apply them. Seventy-one lecturers (62%) claimed to merely have a moderate knowledge of the Regulations.

Defining and describing plagiarism. The results for the four statements measuring the staff members' definition and description of plagiarism are presented in figure 1.

Every lecturer (but two) agreed upon that exactly copying information without mentioning the source is an act of plagiarism (Statement 1). When asked whether copying a line of reasoning in their own words without mentioning the source is plagiarism, results were almost evenly split, as indicated by the similar height of the bars for Statement 2. Staff members are almost unanimous in their opinion that exactly copying information of the Internet without mentioning the source is plagiarism (Statement 3). Fully or partially copying an image without referring to the source is categorized as plagiarism by two thirds of the staff members (Statement 4).

Action(s) undertaken to prevent and penalize plagiarism. Figure 2 visualizes the curative and penalizing actions against plagiarism undertaken by staff members.

Lecturers who give students a warning when coming across an act of plagiarism are equally represented as lecturers who do not (Statement 1). Lecturers who subtract points are underrepresented in this sample (Statement 2). An underrepresentation is also noticeable of lecturers who address the ascertainment of plagiarism with the Head of Faculty (Statement 3). In a similar vein, lecturers are not prone to addressing acts of plagiarism with the ombudsman (Statement 4) or to the chairman of the exam committee (Statement 5). Amongst the lecturers who filled out the questionnaire,
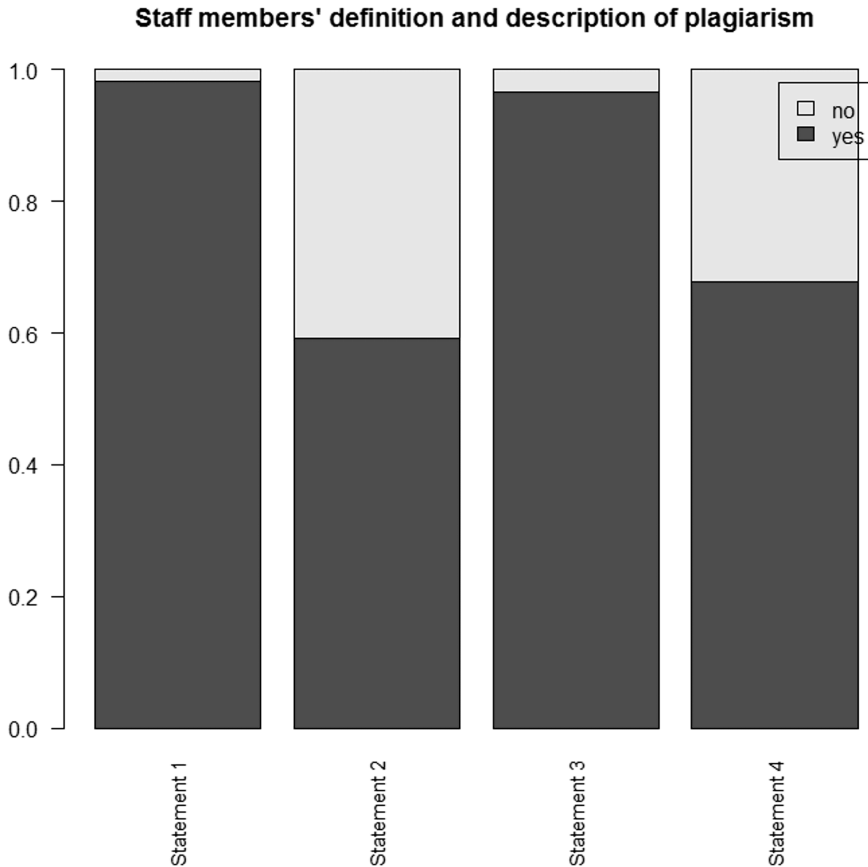
Figure 1. Staff members' definition and description of plagiarism

those who take (some kind of) action are overrepresented (n = 112; 97%), whereas those who do not act upon plagiarism and turn a blind eye are underrepresented (n = 3; 3%).

3.2   *Results Questionnaire students*

Sample characteristics

Five hundred and twenty-four students from different educational programs ($n_{\text{SchoolOfArts}}$ = 11, n_{Health} = 40, $n_{\text{BusinessStudies}}$ = 249, $nT_{\text{eacherTraining}}$ = 123, $n_{\text{SocialWork}}$ = 74, and $n_{\text{Technology}}$ = 27) participated in this questionnaire. The vast majority of students indicated to have an educational background in General Secondary Education (n = 299), followed by Technical Secondary Education (n = 183), Vocational Secondary Education (n = 25) and Art Secondary Education (n = 14) (3 students did not specify their high school background). Most students mention having parents or guardians
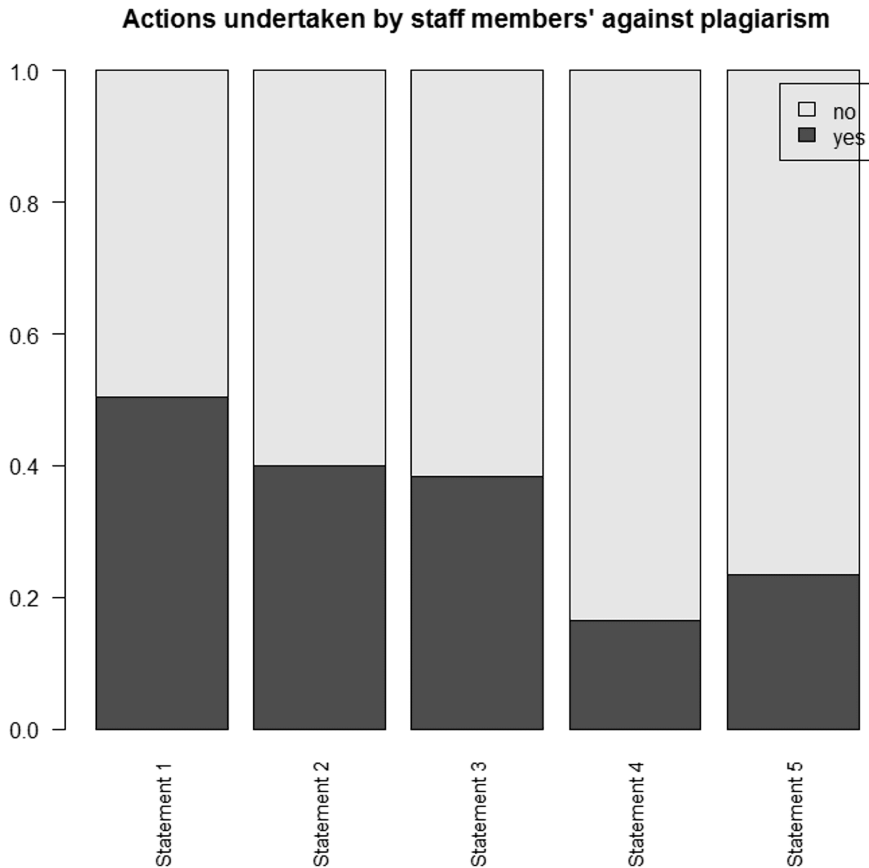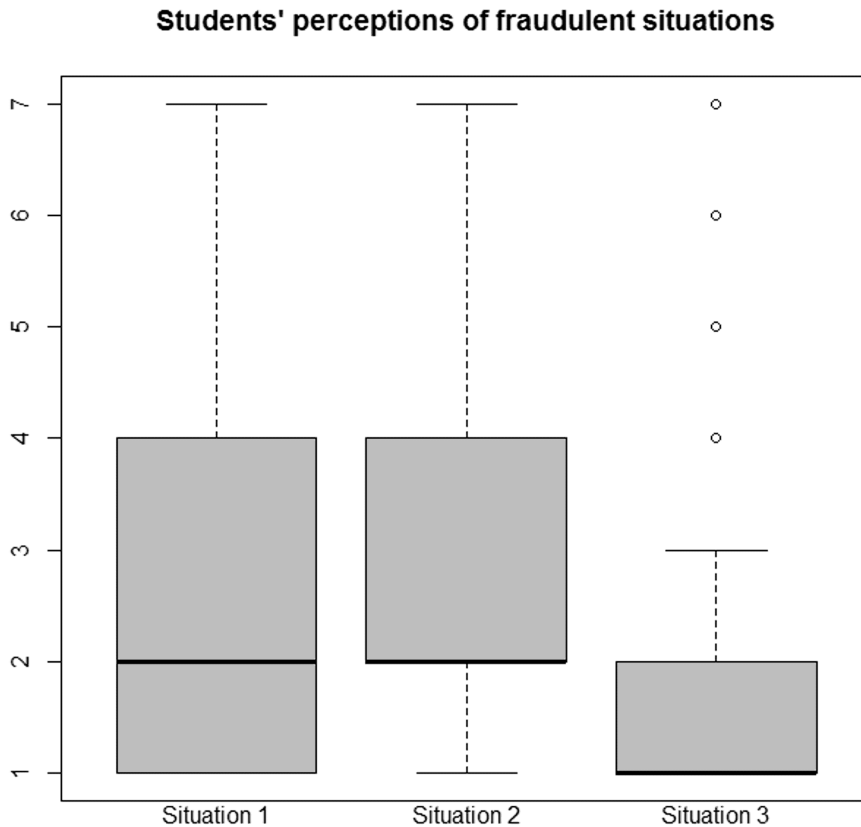
Figure 2. Staff members' actions undertaken against plagiarism

holding a high school diploma ($n_{mother/guardian}$ = 215 and $n_{father/guardian}$ = 233), followed by holding a diploma from a HEI ($n_{mother/guardian}$ = 211 and $n_{father/guardian}$ = 166), having a university degree ($n_{mother/guardian}$ = 63 and $n_{father/guardian}$ = 85) and having completed elementary school ($n_{mother/guardian}$ = 35 and $n_{father/guardian}$ = 40).

Questionnaire

Perceived justice of fraudulent situations. Students agree that the three fraudulent situations are unjust (on a 7-point scale ranging from totally unjust to totally just), as shown in figure 3.

No significant difference was found in perceived justice between scenario 1 and scenario 2 ($t(523)$ = −0.63, p > .05). In contrast, comparing scenario 1 to scenario 3 yielded a highly significant difference ($t(523)$ = 14.05, p < .001) as did the comparison of scenario 2 and scenario 3 ($t(523)$ = 15.78, p < .001). These data show that the

Students' perceptions of fraudulent situations

(see appendix 1)

Figure 3. Students' perception of fraudulent situations

extent to which a situation is perceived as unjust correlates with the students' personal involvement, opposing situation 3 to the first two situations. Only when the fraudulent situation encompasses their own work students perceive the situation as unjust.

Defining and describing plagiarism. Students were queried whether they agreed or disagreed on six questions as to **define the concept of plagiarism**. The answers are summarized in figure 4.

Most of the students disagreed that copying information literally without referral to sources is acceptable (Statement 1). An equal amount of students finds copying information literally without referral to sources acceptable when adjusting the text on a number of points (Statement 2). Apparently, copying a line of thoughts in your own words without referral to sources is acceptable to the majority of students (Statement
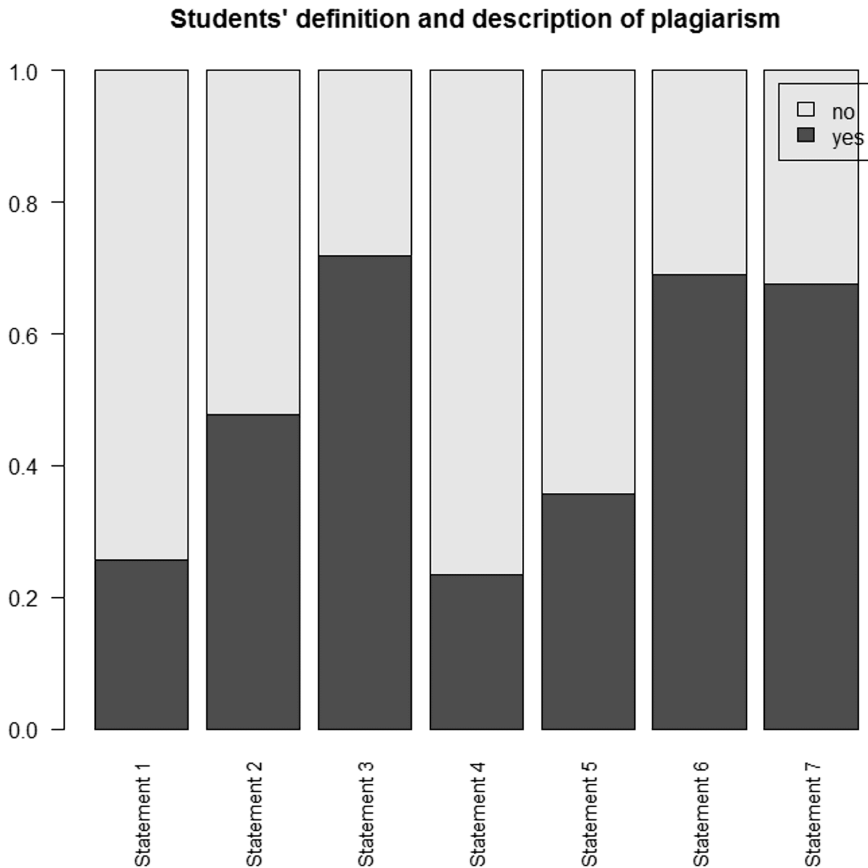
Figure 4. Students' definition and description of plagiarism

3). Overall, copying a text from the Internet without source referral is indicated as unacceptable (Statement 4). Students do not consider using graphs, tables, or figures found on the Internet without source reference acceptable (Statement 5). In contrast, using music, photos or videos from the Internet without referral to sources is largely accepted by students (Statement 6). Likewise, using music, photos or videos found on social media without source referral is acceptable according to the majority of participating students (Statement 7).

In addition, students were asked to indicate to what extent they agreed upon six statements **describing plagiarism** (e.g. "Missing references to sources is plagiarism"), with answers ranging from 1 = I totally disagree over 4 = neutral to 7 = I totally agree. In further analysis, the mean of these six statements is used (Cronbach's alpha = .76). It is noteworthy that the average score has a mean slightly below the neutral score (M = 3.96, SD = 0.94).

Table 1

Impact of educational program on plagiarism description (six combined statements)

Educational program	Mean	95% CI
Health Care	4.30	[4.01;4.59]
Social Work	4.15	[3.94;4.36]
Technology	4.10	[3.75;4.45]
School of Arts	4.00	[3.45;4.55]
Teacher Training	3.87	[3.71;4.04]
Business Studies	3.85	[3.73;3.96]

A sequential ANOVA carried out on the GLM with plagiarism description as response variable and educational program as explanatory variable (car library in R; Fox & Weisberg, 2011) reveals that the educational program students are enrolled in has an overall significant impact on the description of plagiarism (six combined statements), $p < .05$. This means that how broad or narrow students describe plagiarism depends on the program they follow at the HEI. To get a clearer view on which educational programs are responsible for this significant result, we analyzed the predicted values using the effects library in R (Fox, 2003). The analyses on the differences between the predicted variable values are summarized in table 1. '

A closer look at the individual CI's, reveals that only Health Care students have a significantly positive score for the description of plagiarism. The picture emerging for Business Studies students is the opposite: those students have a (too) broad definition of plagiarism.

A sequential ANOVA performed on the GLM with plagiarism description as response variable and study duration as explanatory variable indicated a significant linear effect of how long students take to finish their educational program on their description of plagiarism, with $p < .001$. The longer they take to complete the bachelor program the narrower they describe plagiarism. Possibly, the level of students' maturity explains this effect: the longer they take to finish their educational program the older they are and presumably the more mature they are and the more they seem to grasp the implications of plagiarizing.

Action(s) undertaken by lecturers. Four statements assessed the extent to which students perceive lecturers' preventive and curative actions against plagiarism (e.g. "Lecturers do not adequately stress out the importance of referral to sources"), with answers ranging from 1 = I totally disagree over 4 = neutral to 7 = I totally agree. For further analysis, the mean of these four statements is used (Cronbach's alpha = .71). This average mean score reveals that students feel to be insufficiently informed by their teaching staff on plagiarism and that the current sanctions imposed in case of plagiarism are considered insufficient to have a deterrent effect on their behavior ($M = 3.87$; $SD = 1.23$).

A sequential ANOVA carried out on the GLM with perceived actions undertaken by lecturers (four combined statements) as response variable and educational program as

Table 2

Impact of educational program on perceived actions undertaken by lecturers (four combined statements)

Educational program	Mean	95% CI
Technology	4.52	[4.06;4.97]
Business Studies	4.04	[3.89;4.19]
Teacher Training	3.83	[3.62;4.05]
School of Arts	3.58	[2.88;4.31]
Health Care	3.57	[3.19;3.94]
Social Work	3.39	[3.12;3.67]

explanatory variable identifies a significant relationship ($p < .001$). Table 2 summarizes the predicted values of the different educational programs.

Only in the Technology department, the efforts made by the teaching staff to inform the students of plagiarism are perceived as sufficient by the students. On the contrary, in two departments, Health Care and Social Work, the students deem the information on plagiarism by their teachers largely insufficient.

When we look for a relation between the students' definition of plagiarism and their perception of their teachers' informative and sanctioning efforts on that matter, no correlation worth mentioning appears ($r = -.16$), further sustaining the need for concerted action to make students aware of plagiarism.

Action(s) undertaken to avoid plagiarism in own work. The HEI queried in the current study finds support, as most Belgian university colleges and universities, in the software detection tool TurnItIn. Twenty-one percent of the students is aware of the purpose of this software package, meaning that 79% is not responsive as to why HEIs offer this tool to students. When asking them about their active use of TurnItIn, 42 students (38% of those aware of the purpose of TurnItIn) answered they have at some point already used this tool whereas 69 students (62%) have never used it. Fourteen students (13% of those aware of the purpose of TurnItIn) indicated having adjusted (parts of) their text(s) based on the results of TurnItIn. The results for the actions taken to avoid plagiarism by students are in line with their perception of receiving insufficient advice on plagiarism avoidance.

4   Discussion and conclusion

This study shows that although the HEI provides a description of plagiarism in the Education and Examination Regulations students lack the awareness of what plagiarism entails. Although a majority of the lecturers indicates to have notions of this description, less than a quarter states to have a detailed knowledge of the articles on plagiarism.

Lecturers have a more restrictive definition on plagiarism than students have: in the student survey, only literally copying information, with the exception of photos, music and videos from the Internet, are undoubtedly characterized as plagiarism by a majority of the students, whereas lecturers seem to be more familiarized with the

intricate nature and range of plagiarism. In addition, the majority of the students does not use the plagiarism detection tool offered at the HEI. Instead of being used as the ultimate resort to tackle plagiarism, this tool should therefore be more explicitly incorporated as an educational aid to identify acts of plagiarism in order to increase awareness and to stimulate proactive behavior.

A conspicuous result of this pilot study is that the attitudes of both lecturers and students display very little variation for the SES variables. This finding provides further evidence that the awareness of plagiarism as well as the familiarity with the various facets of plagiarism needs to be enhanced amongst all actors in the HEI.

When taking into account the results of this preliminary survey, it is clear that there is still work to be done to familiarize staff with the infringement that plagiarism is. Currently, addressing plagiarism accordingly is not a priority in the institutional culture. That is, the low response rate and weak enthusiasm corroborate the findings of the IPPHEAE study for Belgium: students, staff members and HEI managers tend to display a lack of interest toward plagiarism. Furthermore, it is conceivable that management and staff might feel threatened by the confrontation of their department with the other departments in the HEI, suggesting a latent awareness that the current situation is far from optimal and in need of improvement. For both students and lecturers the mindset should be turned and tackling plagiarism should become common practice in every HEI, not just in Flanders.

Giving plagiarism the necessary attention in an educational program, focusing on prevention and stressing out the importance of academic integrity needs to be part of HEI policy. Especially when comparing to the results of the IPPHEAE project in other European countries, there is still quite some room left for progress: best practices that emerged from the European project (Sweden, Austria and Slovenia) can be translated and implemented in Belgian higher education.

For future research, the gathered insights of this pilot study can be used and made applicable to a broader audience so that lessons from Belgium can be generalized to and practiced in other countries. It would be interesting to replicate this survey in other HEIs in Belgium and by extension in other European HEIs.

Literature

Bretag, T. (2013). Challenges in addressing plagiarism in education. *PLoS Medicine, 10* (12), 1–4.

Dee, T. S., & Jacob, B. A. (2012). Rational ignorance in education. A field experiment in student plagiarism. *The Journal of Human Resources, 47* (2), 397–434.

Education and Examination Regulations (2015), retrieved from https://www.leuvenuniversitycollege.be/shared/content/bijlagen/OER_1415_ENG_def_werkende_links_1.pdf

Foltynek, T., Kravjar, J., & Glendinning, I. (2014). Case study: policies, strategies and responses to plagiarism in Slovakia. *ERIES Journal, 7* (1), 19–25.

Fox, J. (2003). Effect Displays in R for Generalised Linear Models. *Journal of Statistical Software, 8* (15), 1–27. http://www.jstatsoft.org/v08/i15/

Fox, J. & Weisberg, S. (2011). An R Companion to Applied Regression. Thousand Oaks: Sage.

Glendinning, I. (2013). Comparison of policies for Academic Integrity in Higher Education across the European Union. UK: Coventry University.

Gross, E. R. (2011). Clashing Values: Contemporary Views about Cheating and Plagiarism Compared to Traditional Beliefs and Practices. Education, 132 (2), 435–440.

Hellaby, M. (2011). Plagiarism: an academic and professional issue. *The Journal of Operating Department Practice, 2* (5), 10.

Park, C. (2003). In other (people's) words: plagiarism by university students – literature and lessons. *Assessment & Evaluation in Higher Education, 28* (5), 471–488.

Park, C. (2004). Rebels without a clause: towards an institutional framework for dealing with plagiarism by students. *Journal of Further and Higher Education, 28* (3), 291–306.

Stearns, L. (1992). Copy wrong: plagiarism, process, property, and the law. *California Law Review, 80* (2), 513–553.

Unknown author (07/08/2013). Minder plagiaat bij universiteitsstudenten. Retrieved from http://www.demorgen.be/binnenland/minder-plagiaat-bij-universiteitsstudenten-a1682571/

Youmans, R. J. (2011). Does the adoption of plagiarism-detection software in higher education reduce plagiarism?. *Studies in Higher Education, 36* (7), 749–761.

Appendix 1:
Scenarios perceived justice of fraudulent situations

How just do you find following situations: (from 1 = totally unjust over 4 = neutral to 7 = totally just)

Scenario 1: "You are aware of a fellow student handing in a paper that he/she has received for consideration from another student. Thanks to this paper the fellow student has received a high mark."

Scenario 2: "The high scoring paper of your fellow student exists for a great part out of copy-paste passages"

Scenario 3: "A fellow student who asked you to look at your draft version of a paper appears to have copied pieces of your work without asking you".

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