

The history and implementation of a policy on plagiarism: a case study from K.U.Leuven (Belgium)

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1. Introduction

Located in Flanders, the Dutch-speaking northern part of Belgium, K.U.Leuven has been a centre of learning for almost six centuries. Founded in 1425, K.U.Leuven is the oldest university in the Low Countries.

At present, K.U.Leuven provides tuition and training for more than 37,000 students, around 12% of whom are foreign students from over 140 nations. The university is composed of fourteen faculties, fifty departments and about 240 sub-departments. There are 62 three-year bachelor programmes and 120 one or two-year master programmes. In terms of personnel, there are almost 6,000 academic staff members, ca. 2,800 administrative and technical staff, and 8,700 university hospital staff members.

K.U.Leuven has an institutional partnership (“the K.U.Leuven Association”) with twelve university colleges in Flanders. With more than 76, 000 students, it accounts for over 44% of the entire student population in Flemish higher education.

The K.U.Leuven policy on plagiarism focuses both on preventing plagiarism and on its detection and sanctioning. Since 2009, the university has been using a plagiarism detection system as a tool to serve both purposes. However, the implementation of this tool and its integration in the university policy on plagiarism is marked by a long itinerary of extensive debate, refinement and validation among different stakeholders (representatives of teaching and support staff, academic management and students). In this paper we describe the background and history of the K.U.Leuven policy on plagiarism and try to explain the burdensome process of its implementation. Questions to be answered are: What were the reasons for choosing plagiarism as a policy item? Why did the decision-making process on plagiarism demand so much time and effort? What were the decisions taken and on what basis? How were these decisions translated on the faculty level?

This paper tries to answer these questions on the basis of both document analysis and the authors’ experiences as policy advisers at the Office of Educational Policy and as members of the IT services for education at K.U.Leuven. The authors have taken part in several working groups and advisory boards in which plagiarism came to the front and were responsible for the implementation of an electronic detection system for plagiarism. The documents considered were both working documents and official reports of the working groups and advisory boards concerned, and official policy documents of K.U.Leuven regarding plagiarism.

2. Towards a policy on plagiarism at K.U.Leuven

2.1. Introducing a policy on plagiarism

Until very recently, plagiarism was considered a fraud at K.U.leuven. Hence plagiarism was dealt with in the same way as any other case of fraud, also when it came to imposing sanctions. As a consequence, every case of plagiarism, whether a small and unintended or a major and manifest violation, resulted in a rather strong penalty. This undifferentiated way of dealing with plagiarism was considered by some as a denial of the specificity of cases of

plagiarism and made them fear that cases of plagiarism would be neglected because of the disproportionately severe sanction.

The first requests to impose a university-wide policy on plagiarism were IT-driven: more precisely, the question was whether it was necessary to buy a system for the detection of plagiarism. From the beginning, however, this question was strongly related to recent educational developments within the university.

In 1999, K.U.Leuven introduced a new educational concept. One of its main principles was to decrease the guidance and steering by the teacher and, correspondingly, increase the students' autonomy, self-activation and responsibility. One of the consequences was the increasing number of papers to be written by students. At about the same time, the master thesis started gaining importance after the introduction of the bachelor-master structure in the course of the Bologna process. Together with the growing amount of (scientific or semi-scientific) information on the Internet, these developments gave rise to the impression that students, more than in the past, might be tempted to plagiarize.

In 2004, plagiarism was put on the agenda of the Educational Board of the university. Although the Board was clearly aware of the problem, the time was not yet ripe for introducing a system for the detection of plagiarism. On the one hand, students were afraid of a 'witch hunt' and feared that unsuspecting (and perhaps not well informed) students would become the victim. Teachers on the other hand were not fully convinced of the value of this kind of system. They rather pleaded for improving the educational process itself, by making teachers aware of the importance of the quality of assignments given to students, of guiding students through assignments, discussing the results with the students,... . The Board was rather inclined towards a focus on preventing plagiarism.

Two years later, a system for the detection of plagiarism was again put on the agenda: particularly master programmes in English for international students increasingly started using systems of detection of plagiarism, but not in a coordinated way. Moreover, higher education institutions (HEI's) in Belgium felt an increasing external pressure as local press turned plagiarism into a recurrent item.

In the summer of 2006, the debate on plagiarism developed rapidly on the central level at K.U.Leuven with the creation of a working group committed to submit suggestions on prevention, detection and sanctioning of plagiarism. From the beginning of the activities, a lot of attention was paid to the fact that academic integrity was an issue of the entire university community; hence plagiarism was both to be avoided by students and teachers. As a consequence measures should involve students as well as teachers. For example, where as the first draft of the plagiarism website focussed on plagiarism committed by students, very soon the perspective of the teacher was integrated in the website by a linking to the Commission on Scientific Integrity.

Prevention of plagiarism took off first, mainly because it corresponded with the earlier concern of the Educational Board to focus primarily on prevention. A first step was the university wide awareness campaign (March 2007). Key events in this campaign were the launch of a plagiarism website, the organisation of a conference with national and international experts and the integration of plagiarism as a main item in the training sessions for teachers organised by the central service for educational support of the university. The plagiarism website (<http://www.kuleuven.be/plagiarism>) which is still a reference point for HEI's in Flanders, contains information with regard to the definition of plagiarism ("Plagiarism is any identical or lightly-altered use of one's own or someone else's work (ideas, texts, structures, images, plans, etc.) without adequate reference to the source"), the

reasons why students plagiarize, ways to avoid plagiarism, tools to detect plagiarism At the same time the examination regulations were amended in order to better define plagiarism as a particular type of academic fraud. The range of possible sanctions was extended in order to better adapt the actual sanction to the seriousness of the violation. It was assumed that many cases of plagiarism were not reported by the teacher because of the rigor of the existing sanctions. Also the criteria for estimating the seriousness of the violation (see below) were made explicit.

The conference, organised in September 2007, focused both on alerting the academic community for the essentials of the university policy in the field of plagiarism as well as on sharing good practices in the field of prevention and detection of plagiarism. The keynote speaker was the international expert Jude Carroll (Oxford Brookes University). The main target groups of this conference were teachers, students representatives, programme directors, deans and vice deans for education and people from the partner institutions within the Association K.U.Leuven (i.e. colleges of higher education associated with K.U.Leuven).

2.2. Acquiring an electronic system for the detection of plagiarism

The decision process on the acquisition of a system for the detection of plagiarism and the launch of a plagiarism policy took more time. It started in January 2007, when the Academic Board approved of the launch of a plagiarism policy and the start of a market research in order to purchase an electronic system.

After extensive market research, testing and discussions between October 2007 and March 2008 a working group established a list of criteria that served as a basis for the specifications of a tender for the acquisition of an electronic system for the detection of plagiarism. This tender was launched in July 2008 and led to the selection of a system in November 2008. In February 2009, at the start of the second academic semester, this system was successfully launched.

In line with the official K.U.Leuven policy, the potential of the system for the prevention of plagiarism, for the creation of awareness, and for teaching got the same weight in the final evaluation as the quality of the detection of plagiarism. For practical reasons an equally important criterion was the possibility to integrate the system as an online service in the electronic learning environment of the University, TOLEDO (Blackboard). The various criteria that determined the selection can be divided into six main groups:

- the quality of the reference corpus used by the system: size, constitution and representativity of the reference corpus against which the documents will be compared;
- the protection of the intellectual property of the submitted documents;
- the protection of the privacy. (To which extent can classified documents be scanned and protected from third parties, inside or outside the own institution?)
- the technical possibilities to upload documents, generate reports and start workflows:
 - strategies to upload documents (accepted file formats, file size, procedures to upload documents and/or to constitute a reference corpus, integration in an electronic learning environment);
 - types of reports that can be generated (online, offline, print version);
 - ways to start a workflow when a case of plagiarism has been detected;
- the quality of the generated plagiarism detection reports (number and relevance of the detected sources);
- the user friendliness of the generated plagiarism detection reports (synthesis of the results, layout, adaptability, hyperlinks to the source documents);

Considering the relative weight of those criteria, the working group considered Turnitin as the best solution offered: not only does it offer the most extensive set of technical features, it also obtained the best scores in the technical and user tests carried out by the working group.

The implementation scenario of the electronic system included a complete integration of its features in the online learning environment of the university, TOLEDO (powered by Blackboard). Direct access from within TOLEDO to the entire functionality of the online service for the detection of plagiarism is for that reason essential. The Turnitin building block for Blackboard offers the broadest range of functionality and even some unique features, which were not present in the solutions presented by the other competitors. These features are of crucial importance for the K.U.Leuven. Turnitin is the only solution that enables the teacher through its building block for Blackboard:

- to give students access to the plagiarism detection reports (Feature explicitly requested by the plagiarism working group of the K.U.Leuven.);
- to upload documents for verification without the collaboration of students in an assignment (individual documents or bulk or zip uploads);
- to upload and scan documents without having to add them to the reference corpus (important for documents with sensitive information);
- to download an offline version of the plagiarism detection reports to start a workflow outside Blackboard in case of detected plagiarism.

The working group also considered the plagiarism detection reports generated by Turnitin as better than the reports generated by the other services under consideration. The on-line Turnitin reports show more relevant sources, offer more possibilities for interactive customization, are characterized by the most attractive lay-out and ergonomics and can be saved in an off-line format.

2.3. Developing further a policy on plagiarism

In parallel with the preparations for the acquisition of detection software, the decision-making process with a view to implementing a policy on plagiarism was taken a step further. The working group developed proposals regarding concrete measures supporting prevention, detection, handling of cases and a sanctioning system. The main emphasis in the development of a plagiarism policy remained on the prevention of plagiarism. Hence the use of the plagiarism detection system as a tool in the learning process of the student was considered to be important. Essential aspects of the proposals regarding plagiarism detection and sanctioning were the policy regulations on the screening of student work, especially the master thesis, and on the allocation of responsibilities.

It turned out to be hard to decide on these proposals regarding the responsibilities and the object of screening. The policy proposals of the working group were the following¹:

1. Prevention of plagiarism:

With regard to the use of the detection system as part of the teaching process, the working group proposed to allow each student to have at least one (unfinished) piece of work screened in the course of his or her learning career (one at the undergraduate and one at the graduate level). The student should receive sufficient feedback about the screening based on the

¹ Cf. proposal of the working group, put on the agenda of the Board of Education of 18th of March 2007.

detection report. Detection of plagiarism in the course of the learning process would not lead to any form of penalty.

The working group also drew special attention to the introduction of courses aimed at training students' information skills.

2. Detection of plagiarism

One proposal consisted of the obligatory screening of every master's thesis through the electronic detection system; in these cases, proof of plagiarism would lead to a sanction. As to all other kinds of (finished) papers, teachers themselves would have to decide whether or not the paper should have to be uploaded through the e-learning platform (TOLEDO), whether or not it should be screened, and whether or not the detection report should be checked.

The working group also proposed to clearly define the responsibilities in the detection (and sanctioning) of plagiarism:

- The primary responsibility for detecting plagiarism in student work would remain with the *individual teacher*, who should always use his specialist knowledge and academic judgement in deciding on what is and what is not plagiarism. However, according to the working group each teacher should have the opportunity to call in help and support for the collection of evidence, for the interpretation of the detection report and for all kinds of administrative procedures.
- Therefore, the working group considered it useful for each faculty to have a contact person (an *academic conduct officer*), who would handle all cases of plagiarism. From experiences elsewhere², the appointment of an academic conduct officer was considered to be a good practice as this person would assist teachers in discharging their duties (both in terms of time and emotional involvement) and would build up experience in the field, resulting in a more fair, transparent and balanced treatment of students (comparable penalties for equivalent acts of plagiarism). Moreover, each teacher would have one contact person who is well acquainted with the academic discipline or domain. Finally, training sessions dealing with plagiarism would in this way be limited to a rather small and manageable group. In the proposal of the working group this academic conduct officer in each faculty would be responsible for:
 - investigating (in cooperation with the teacher) all cases of suspected plagiarism in his or her faculty;
 - deciding (again in cooperation with the teacher) on the level of violation;
 - advising the exam committee on the scale of penalty;
 - record-keeping of all cases of alleged and detected acts of plagiarism, including the level of violation and the scale of the penalty.
- The *exam committee* would still have to decide on the appropriate penalty. In case of plagiarism on the third level (see below), the exam committee would decide on the penalty after consultation of the fraud commission.
- Each year, this *fraud commission* would be informed about the cases of detected plagiarism and the way they were dealt with; the commission would give feedback about the findings to the academic conduct officers. In this way the commission would play a key role in the design and implementation of a coherent plagiarism policy.

Finally, the working group also considered it useful to register all cases of plagiarism at the central level with a view to following-up and adjusting the university-wide plagiarism policy.

² J. CARROLL, 2007, p. 117.

3. Sanctioning of plagiarism

Based on the principle that the level of penalty should be related to the level of offence and following the example of – among others – the Curtin University of Technology³, the working group proposed to determine the level of offence of an act of plagiarism on the basis of four criteria: (i) the experience of the student; (ii) the nature of plagiarism; (iii) the extent of plagiarism and (iv) the intention of the student to plagiarise. On the basis of these criteria, the exam committee, advised by the academic conduct officer, would have to classify an act of plagiarism at level 1, 2 or 3. This would result in an appropriate penalty with aggravating or mitigating factors leading to a shift between level 2 or 3. Students would then have to repeat (part of) the assessment (with or without a reduced marks), or simply receive a reduced mark or a nil mark for that part of the assessment that is compromised. Or they can get a nil mark for the entire course unit, get a nil mark for the entire assessment period or even be dismissed from the university. In the latter case, the rejection should be ratified by the fraud commission (composed of 3 academic conduct officers and 3 chairmen of exam committees, the legal advisor on education, the vice-rector for education and a policy advisor of the Office of Educational Policy). In all cases, the exam committee can oblige the student to complete a self-tuition module or any other form of training.

Of all the proposals of the working group mentioned, only the sanctioning system was implemented, albeit without taking aboard the proposed rearrangement of responsibilities in the detection and sanctioning of acts of plagiarism. The exam committee remained responsible for determining the level of offence (on the basis of the four criteria mentioned above) and the level of the penalty. But there turned out to be no agreement on the appointment of an academic conduct officer in each faculty. The reason is fear for intruding the autonomy of individual teachers and of exam committees. Faculties were only given the possibility (not the obligation) to appoint an academic conduct officer as an advisor to the exam committees.

Also the compulsory screening of at least one piece of work (in the course of the learning process) and of all master's dissertations was not implemented due to fear to overtax teachers. Another fear that hindered the full implementation of the working group proposals, was fear to create a climate of distrust in case the plagiarism detection and sanctioning structure would be too visible or explicit.

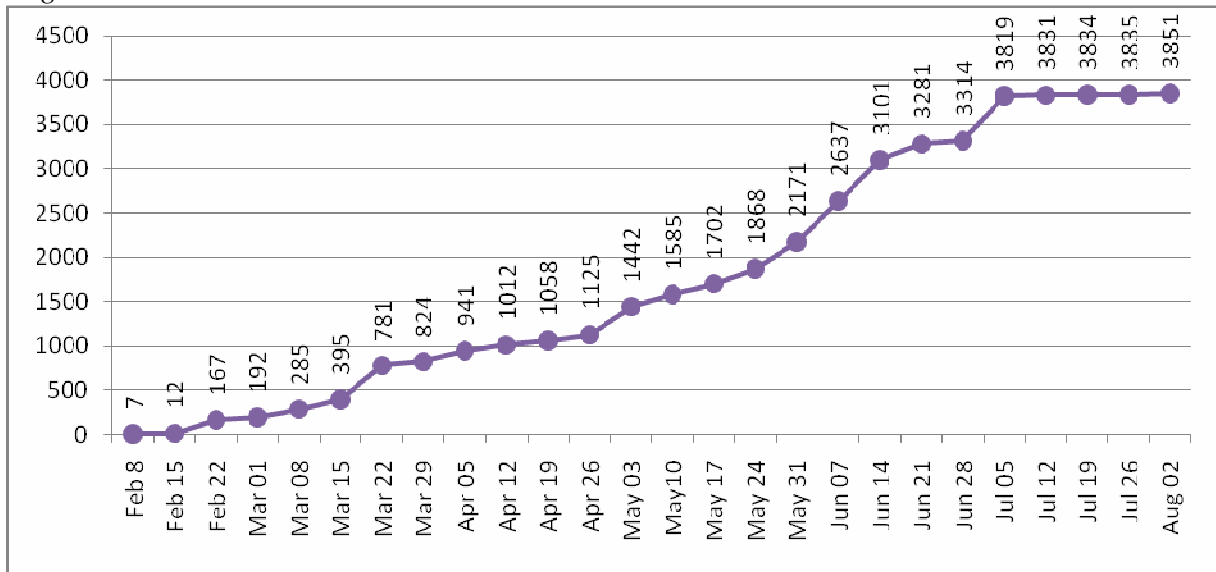
2.4. Using the plagiarism detection service

In spite of the partial implementation of the policy proposals of the working group, the Turnitin plagiarism detection service has been promptly adopted by the teaching staff. Given the fact that every professor can individually decide how and when his/her students have access to the service, there are of course variations in the adoption. After the first year, however, we see that some faculties are now trying to streamline the use of the service and try to establish guidelines.

Reconsidering the adoption of the service we observe the following pattern in the first half year it was available (Graph 1).

³ <http://www.policies.curtin.edu.au/documents/plagiarism/pdf>; Yeo – Chien 2007; Lancaster University Plagiarism Working Party: “Dealing with Plagiarism by Students. Institutional Framework”, 2004 - see also Lancaster University (<http://www.ling.lancs.uk/current/undergrad/docs/plagiarism.pdf>).

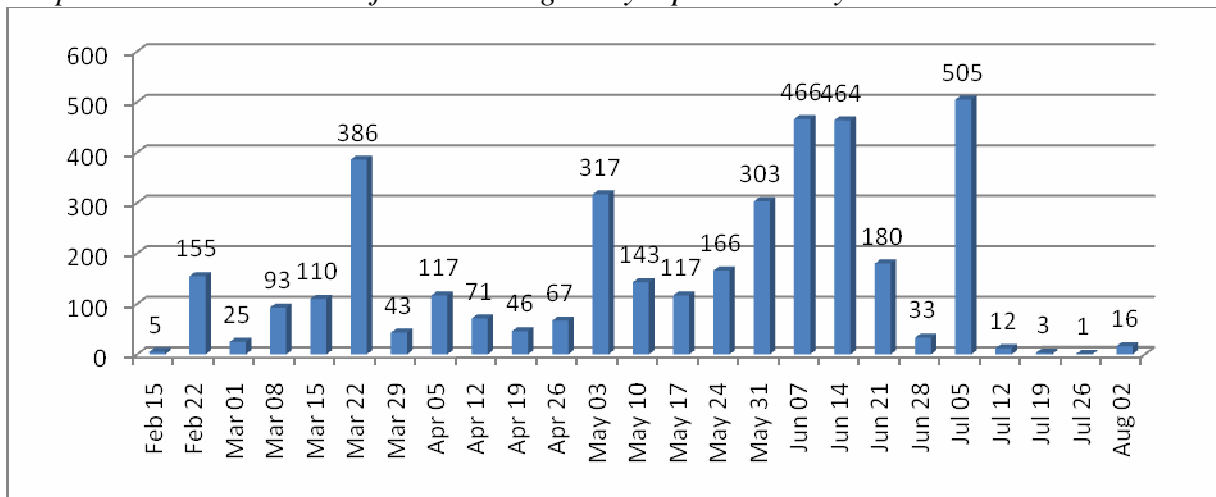
Graph 1: Cumulative number of generated Turnitin originality reports: February 2009-August 2010



Turnitin was launched on February 20th 2009. During the second semester of the academic year 2008-2009 a total of 3851 originality reports were generated, in the courses and communities in TOLEDO of 259 different instructors.

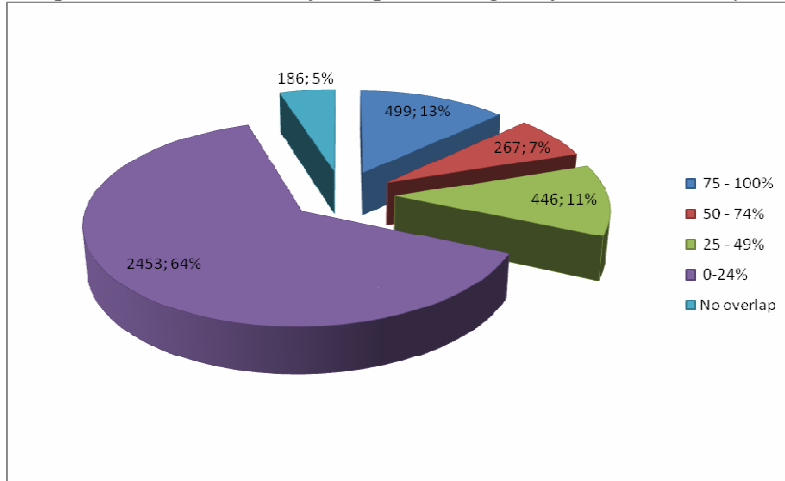
After a slow start, a first peak in the uploads can be observed in the week of March 22nd (Graph 2). This peak coincides with a first training session on plagiarism on March 20th. Other peaks can be observed in the last week of May (303) and the two first weeks of June (466 and 464), when the master theses and final term papers had to be submitted. The top week, however, is July 5th when 505 papers were submitted. At that moment the examination board meetings and public announcements of examination results take place.

Graph 2: Absolute number of Turnitin originality reports week by week



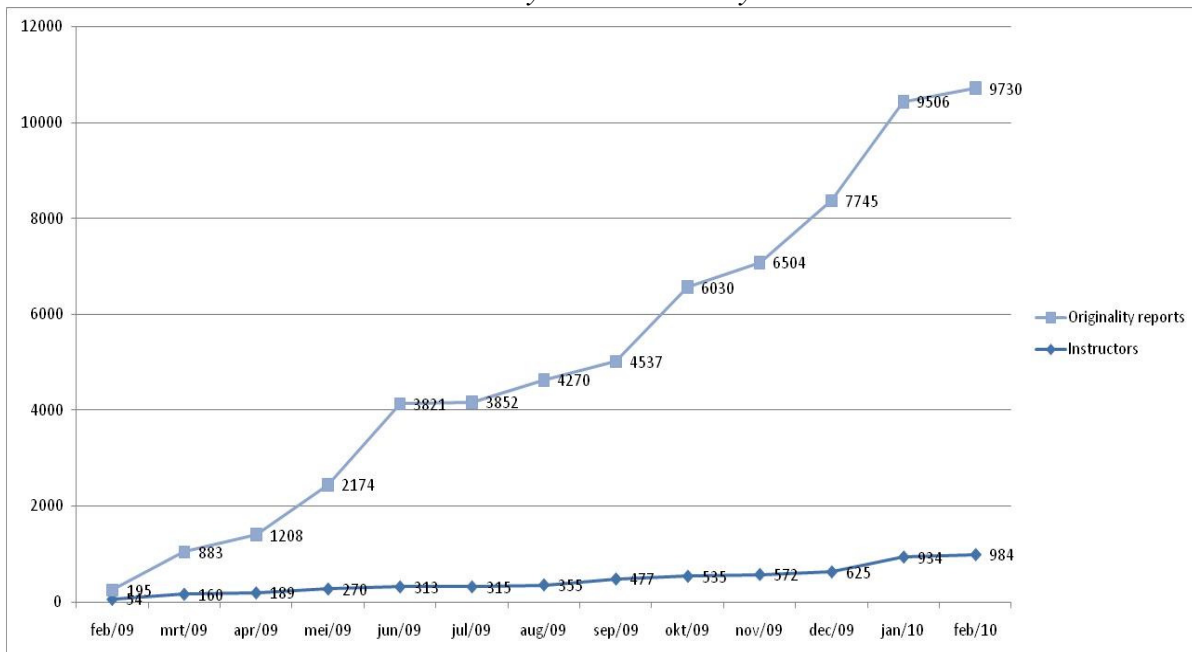
The majority of the 3851 papers submitted is characterized by a percentage of text similarity situated between 0 and 24% (64% or 2453 papers). For 5% (186) there is no overlap with any source used by Turnitin. For 11% (446) the percentage is between 25 en 49%. For 20 % of the submitted papers an overlap of more than 50% with other sources used by Turnitin can be observed: 7 % (267 papers) show between 50% and 74% percentage of overlap; 13% (499 papers) show between 75% and 100% percentage of overlap.

Graph 3: Distribution of the percentages of text similarity

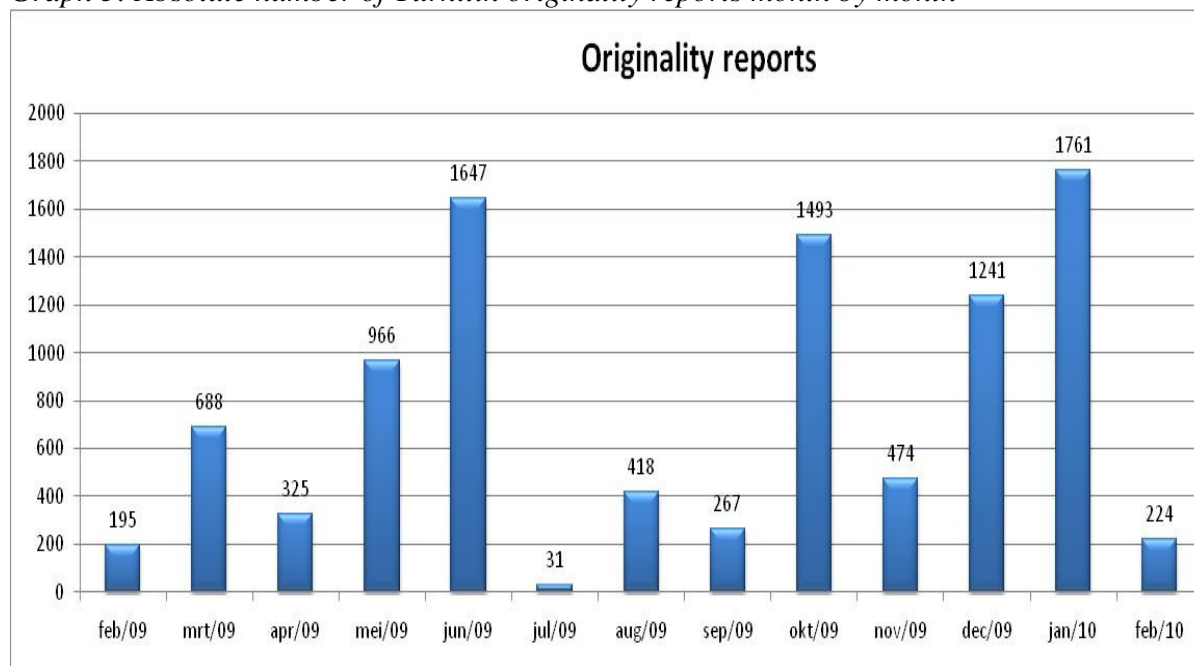


It goes without saying, however, that the number of effective cases of plagiarism that have been detected, cannot be determined on the basis of those numbers alone. The tendencies observed in the first half year (second semester 2008-2009) following the introduction of Turnitin are confirmed in the first half of next academic year (first semester 2009-2010). As can be observed in Graph 4, the number of submitted papers has almost triplicated, from 3852 in July 2009 to 9730 in February 2010. Graph 5 shows that, again, there are peak periods of submissions at the beginning (October 2009) and at the end (December 2009 / January 2010) of the semester. The first peak coincides with training sessions and tryouts for students, the second with the submission of papers at the end of the first term.

Graph 4: Cumulative number of generated Turnitin originality reports & number of instructors who use the service: February 2009- February 2010



Graph 5: Absolute number of Turnitin originality reports month by month



As can be observed in Table 1 and Graph 6, the percentages of text similarity split up by semester show an increase in the number of papers with a high percentage of similarity (75-100%: from 13% to 26%) and a decrease in the numbers of papers with a low percentage of overlap (0-24% of text similarity: from 63,47% to 48,65%). It's too early however to conclude on the basis of those statistics that the number of cases of effective plagiarism has increased. We know that a lot of instructors submit the same papers several times in the course of training sessions and also that some groups of students have been given the possibility to submit different versions of the same paper several times (sometimes as a revision assignment, sometimes not).

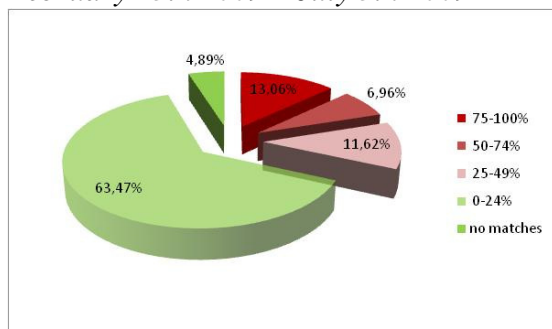
Considering those uses by instructors and students and the limited number of papers submitted, we cannot conclude that text similarity with other papers increases significantly or that plagiarism is augmenting. In order to be able to establish global tendencies and generalizable conclusions, more numbers will be needed in the future and these statistics have to be complemented with other information.

Table 1: Distribution of the percentages of text similarity by semester

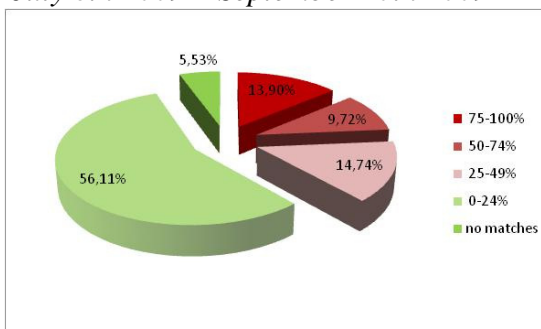
	Absolute number of originality reports	75-100% Text similarity	50-74% Text similarity	25-49% Text similarity	0-24% Text similarity	No matches
Second Semester 2008-2009 (5/jul/10)	3822	13,06%	6,96%	11,62%	63,47%	4,89%
Summer Period (20/sep/09)	597	13,90%	9,72%	14,74%	56,11%	5,53%
First Semester 2009-2010 (7/feb/10)	5172	26,39%	8,99%	9,05%	48,65%	6,92%

Graph 6: Distribution of the percentages of text similarity

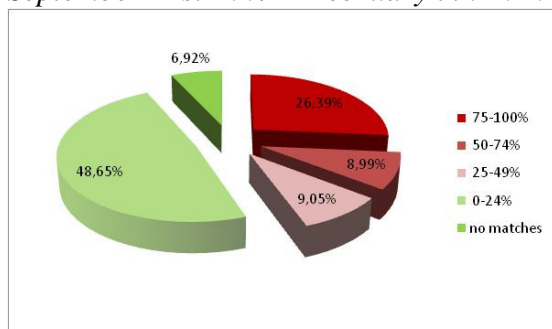
February 15th 2009 – July 5th 2009



July 6th 2009 – September 20th 2009



September 21st 2009 – February 7th 2010



In the months following the launch of Turnitin, a number of information sessions were organized. These were not merely intended as technical introductions to Turnitin, but also consisted of group discussions dealing with plagiarism in general, plagiarism in student work, and strategies for preventing and dealing with plagiarism. These discussions exposed vast discrepancies among teaching staff in the way plagiarism was assessed. Most users came to the sessions with a fairly straightforward view of what constitutes plagiarism, many left with an understanding of the - unexpected - complexity of the matter. The way in which plagiarism was viewed differed among faculties (and scientific disciplines), but also among individual teachers. The most striking differences in awareness of plagiarism were:

- different referencing schemes;
- varying degrees of leniency regarding the proper use of the referencing scheme;
- differing views on reasons for plagiarizing (from malice over laziness to ignorance);
- differing views on prevention (and the role of the teacher) and on sanctioning.

Moreover, practically all teachers harboured overly high expectations of Turnitin and plagiarism detection software in general. The most important misconception concerned the fact that the software can not detect plagiarism, nor can it determine whether a student plagiarized or not. It only detects originality and similarity (although it is not always marketed in that way). Second, the software is not a 'one click solution'. That is, it will not reduce the workload of a teacher in a considerable way. On the contrary, systematic use of the software will increase the workload. Third, the software is not fool proof, it can only detect what is detectable (if a source does not exist in digital form or is not part of the reference collection, it can not be found).

The confrontation of overly high expectations with the nature and limitations (and flaws) of the software tended to result in a certain sense of disappointment. During a brief hands-on session, teachers could get a sense of how the software works and what it can and cannot do. Eventually most attendees appreciated that the software is not a tool that will relieve teachers

from much of the burden of reading, checking and grading papers, but a tool that will help them to check papers in a more systematic and thorough way.

3. Discussion and conclusions

As a result of educational developments, some of which were related to the introduction of the bachelor master system, plagiarism was put on the policy agenda of K.U.Leuven. For international courses and students in particular, the need was felt to focus more actively on the prevention and detection of plagiarism. This perceived need did, however, not result in quick decision making. On the contrary, both the teachers and the students were wary of focusing on plagiarism and its detection more in particular. Nevertheless, steps were taken to introduce a university-wide policy on plagiarism. Raising awareness and building up expertise were the first concerns, resulting in, among other things, a website, a conference, and workshops. At first, the priority was clearly on the prevention of plagiarism. The second step was the acquisition of an electronic system for the detection of plagiarism. An extensive market research was conducted with clear criteria in mind, not only technical but also including user friendliness. In parallel, the policy on plagiarism was developed further, meaning that the examination regulations were adapted in order to define plagiarism in its own right, with sanctioning criteria specific to cases of plagiarism. This turned out to be important, because the former sanctioning mechanisms were by many considered to be too severe, which was believed to lead to neglecting cases of plagiarism. Also important was the bottom up approach that had in the meanwhile been developing in faculties and course programmes (especially international courses) that were confronted with cases of plagiarism.

But a comprehensive policy on plagiarism still was difficult to implement. The extensive proposals of a designated working group were only partially implemented. One year after the introduction of the detection system, however, the question of implementing the other - rejected - aspects of a plagiarism policy currently seems to come to the fore once more. More in particular, on the faculty level a need is felt to have a more coordinated policy for the entire university. Currently, the policy strategies and decisions in the different faculties in the university appear to be quite diverse and ad hoc. In some faculties, the responsibility of determining the level of the offence and of the penalty is strictly limited to the exam committee; other faculties have appointed an academic conduct officer, who has an advisory and supporting role in this process (and also turns out to have quite a strong role in the process of making teachers and policy makers aware of the issue of plagiarism). In most faculties, the focus is still largely on prevention of plagiarism (whether or not with the help of the academic conduct officer): there is an increased attention to information skills at undergraduate level. In some faculties the libraries also play an important role in this process, by giving (on line) instructions on search strategies or by elaborating tutorials. The detection of plagiarism is less well developed at the faculty level, although the use of Turnitin for this purpose has increased considerably.

In order to implement a comprehensive policy on plagiarism, from the case study of K.U.Leuven it seems important

- a) to set as a goal to include all aspects of plagiarism (prevention, detection, sanctioning) and to attune these aspects to each other (e.g. the severity of sanctions must be in line with the severity of the case);
- b) to take account of possible resistance among both students and staff towards this goal, and of different interpretations and different expectations with regard to plagiarism in general

and plagiarism detection software in particular (e.g. making clear that software alone is no solution to plagiarism);

- c) to take account of the (long) time it takes to create or develop a culture throughout the institution in which plagiarism (or avoiding it) is taken for granted.

In order to achieve this, a continued information and communication strategy seems to be needed, including actions to raise awareness (e.g. a conference, a website, leaflets) and to explain (e.g. in workshops) the university's plagiarism policy and the use of electronic tools (e.g. manuals, quick sheets, and scenarios for using Turnitin were developed at K.U.Leuven). At K.U.Leuven, one of the next steps in the policy implementation process will be to develop a workflow for master theses, which from now on will be submitted electronically by the students and hence it will become possible to automatically screen them with Turnitin in the course of the submission process.

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