



Impact of Policies for Plagiarism in Higher Education Across Europe

Plagiarism Policies in Estonia

Full Report

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1. Information sources

Information about Estonia was collected through

- the three levels of on-line questionnaire (*students*, *teachers* and *senior managers*);
- structured interviews with *academics*, *university senior managers* and *individuals* concerned with academic integrity and research at national level and at higher education institutions;
- Documentation and on-line evidence.

Interviews about academic integrity and plagiarism with senior managers from the Higher Education Institutions were conducted in different ways: face to face, by telephone and via Skype.

Providing research into regulations concerning plagiarism prevention in Estonia was done by analysis of following legal acts, adopted by Parliament of the Republic of Estonia:

- Copyright Act, adopted on 11/11/1992;
- Universities Act, passed 12/01/1995;
- Institutions of Professional Higher Education Act, passed 10/06/1998;
- Private Schools Act, passed 03/06/1998.

No mention of plagiarism was found in the last three of these acts. The research also made use of analyses and internal HEI documentation available via the Internet and documents received from participants of national level interviews.

The answers to questionnaires were received from students and teachers of a small number of various state universities of Estonia. Vice-rectors of a few universities refused the invitation to participate in the survey by declaring absence of plagiarism cases in their universities. According to one participant *“It also correlates well with Estonian Higher Education Quality Agency’s Institutional accreditation reports about HEIs. Usually HEIs report no or very few cases of plagiarism”*.

Views and opinions from university students and academic staff, participated in the survey, are also included into this report. Where possible in the following report the opinions of the participants, with colour coding, have been used to inform and enrich the narrative.

The breakdown of survey participants is summarised in Table 1.

Table 1: Breakdown of Survey responses in Estonia								
Country	Student responses	Teacher responses	Senior Management and National	Student Focus Groups	Organisations and Institutions			
Estonia (EE)	48	8	2	0	10			
Breakdown of student responses	Home students	Other EU students	Non-EU students	Not known	Bachelor, diploma	Master, doctor	Blank, other	
Estonia (EE)	48	48	0	0	-	-	-	

The survey was completed by 48 students and by 8 teachers, representing 10 HE institutions. Responses were also received from two independent people providing a *national perspective*. The number of questionnaire responses was low and particularly there were no responses received from senior university managers. As Table 1 shows all the student respondents were resident in Estonia with no responses from international students studying in universities in Estonia.

2. Higher Education in Estonia

According to 2012 statistics available there were 29 HEIs in Estonia of which seven were universities, six public and one private. Of the other 20 HE institutions (professional higher education schools) 9 were state-owned and 11 are private. (Statistical database ..., 2012)

In 2012 64,000 students were enrolled in higher education in Estonia with 76% of these students studying in universities, 22% in professional higher education schools and the rest in vocational schools. Of the students studying at university about 38% were studying for bachelor degree, 20% master, 6% integrated bachelors and masters and about 6% at doctoral level. The remaining 31% of university students were studying for professional higher education qualifications (Education Eye). The Professional HE schools and vocational schools provided professional higher education qualifications. Professional higher education schools also supported 334 master's level students (Statistical database ..., 2012).

The number of international students in Estonia was comparatively low – only 2020 or 3.2 percent from total number of students. Most of them - i.e. 978 or 48.4% were residents of Finland, 628 or 31.1% from other European countries and 423 or 20.5% of other countries over the world – i.e. Africa, Asia, Latin America and Caribbean area, Northern America and Oceania (Statistical database ..., 2012).

Assessment in Estonia universities is by way of end of semester examinations. However other forms of assessment, including oral examinations and multiple choice tests, may be offered at other times during the study programme. Oral examinations may be conducted for individuals or groups of students (Tests and Exams, 2012).

“The results of an examination or preliminary examination are given in the form of marks or may be evaluated as a pass (*arvestatud*) or a fail (*mitte arvestatud*). According to government regulation, all Estonian institutions of higher education use a standardised 6-point scale of grades based on the percentage of acquired knowledge: 5 or A (excellent / *suurepärase*); 4 or B (very good / *väga hea*); 3 or C (good / *hea*); 2 or D (satisfactory / *rahuldav*); 1 or E (sufficient / *kasin*) and 0 or F (insufficient / *puudulik*)” (Grading, 2012). The use of this grading system means that it is not possible to directly align with or translate the credits to the European Credit Transfer Scheme (ECTS).

Researchers' experience suggests that the opportunities and culture for plagiarism and inappropriate collusion can be influenced by whether students are required to work individually or in teams. The teachers' questionnaire asked respondents to comment on the typical assessment students were required to complete: “*what percentage of your programme assessment requires students to work individually or in a group*”. From the 8 respondents 3 said their courses had at least 70% individual work and 30% group work, two teachers declared ratio 80%/20%, one 60%/40% and others did not answer this question.

Also, teachers were asked to “*indicate the approximate percentage of assessment types that students have on their programme*”. The responses to this question differed according to the faculties in which they were working. Answers in first two lines of Table 2 were provided by teachers working in faculties of computer sciences and in the others by teachers, working in faculties of social sciences or economics and management.

Examinations	Assignments	Projects	Other
20	60	20	
16	42	42	
40	30	30	
60	20	20	
60	10	30	
50	40	10	

Taking into account the very small number of answers it is possible only to see some tendencies, but it is impossible to generalise. However this information from the survey demonstrates that student assessment in Estonian HEIs is not confined to formal examinations.

3. *Quality Assurance in Estonia Higher Education - teaching, learning and assessment*

The main legal act regulating the use of Intellectual property in Estonia, the Copyright Act, was adopted on 11th November 1992. This document states that use of Intellectual property, including scientific production, is available only with the author's consent and payment of remuneration. In this law also are defined cases, which are very important in research and studies process, when use of the Intellectual property may be permitted without the author's consent and without payment of remuneration, but with obligation to indicate the name of the author of the work, if it appears in the work, the title (designation) of the work and the source in which the work has been published. The more liberal use described in the points below applies to use in teaching and is also limited to an "extent justified by the purpose"(Copyright Act, 1998):

1. to abstract or quote lawfully published works in another work to a reasonable extent and under the obligation to communicate accurately the meaning of the work abstracted or quoted as a whole, including abstracting and quoting articles of newspapers and periodicals in order to present a report of the press;
2. to use a lawfully published work or parts thereof by way of illustration in publications ... for teaching purposes;
3. to reproduce articles and extracts from published works by reprographic means exclusively for purposes of teaching and scientific research in educational and research institutions the activities of which do not serve direct or indirect commercial gains.

Regulation of copyrights and processes of studies and research and functioning of higher education and research institutions in Estonia are provided in following legal acts: Copyright Act, Act of Universities, Act of Professional Higher Education Institutions and Act of Private Schools. None of these documents include a definition of plagiarism or other forms of academic dishonesty, but they define the basic rights and obligations of authors, including students. The principles of academic ethics are defined in Codices of Ethics or particular Higher Education Institutions (HEIs).

According to the above legislation Estonian HEIs are responsible for creation and implementation of a quality assurance system for internal studies and have to regularly provide for self-assessment and improvement of this system. The Higher Education Quality Agency is responsible for oversight of quality in HEIs in Estonia. The auditing of policies for academic integrity, plagiarism and academic dishonesty are part of the institutional accreditation visits, during which the functioning of internal quality assurance system has to be assessed.

Seeking to create common infrastructure for checking students' written work, exchanging good practices and rationally using limited finances resources rectors of seven Estonian universities: The Estonian Academy of Arts, the Estonian University of Life Sciences, the Estonian Academy of Music and Theatre, the Estonian Business School, the Tallinn University of Technology, the University of

Tallinn and the University of Tartu signed a document “Agreement on Good Practice regarding quality” on 8th September 2011. The eighth item of this document says: *“The universities raise the overall awareness of intellectual property matters and cooperate in preventing and detecting creative thefts. To attain the objective, the universities make the students’ graduation theses available on the web and develop a joint plagiarism detection system. For the purpose of preventing the misuse of the work of an academic employee of another university, the universities pay attention to training and informing their employees. The universities also make the acquisition of knowledge and skills of protection of intellectual property one of the mandatory outcomes of doctoral studies.”*

The efforts to locate statistical data about plagiarism allegations for students’ written work were unsuccessful. No statistical or research data were available either on numbers, outcomes and penalties applied to student plagiarism cases. The lack of national statistics was confirmed through a national level interview.

However a serious case of plagiarism in final theses were reported in the Estonian press in February 2012 (Tartu Postimees Article 01/02/2012, in Estonian). From 73 final theses at Tartu Health Care College defended in January 2012, 12 of the theses (some individual and some co-authored) were downgraded after a whistle-blower exposed the extent of plagiarism. The following year the college detected that six out of a cohort of 149 final theses were found to be plagiarised, leading to one expulsion and sanctions for 15 students (Tartu Health Care College Annual Report 2014). This change to a pro-active response after just one year is a very encouraging sign that this institution has understood the seriousness and is prepared to defend the integrity of its assessment processes.

4. Academic Integrity and Plagiarism in Estonia

4.1 Policies for plagiarism

Referring to the responses to part of question 5, summarised in Annex EE-1, 75% of the students and 7 from 8 of teachers, who participated in the survey, agreed that their institution had policies and procedures for dealing with plagiarism. In addition, 6 teachers agreed that their *“institution takes a serious approach to plagiarism prevention”*. Regarding information about plagiarism being available to students, 71% of students and 7 of 8 teachers who participated in the survey answered positively.

The representative of the Higher Education Quality Agency, provided answers to National level questionnaire, pointed out that according studies quality standard *“Students are guided to recognize plagiarism and to avoid it”*. In addition, *“the prevention policies and methods of student plagiarism are checked during institutional accreditation”* (national interview). Although details are included on a web site in English about the accreditation process, which is based on an institutional self-assessment, no specific details are included in the guidelines about how systems and policies for academic integrity and quality are benchmarked or assessed, what would be the consequence of non-compliance or institutional deficiencies and whether this process is leading to improvements in institutional practices (EKKA institutional accreditation). According to a national interviewee, of the ten institutional audits conducted to date, all institutions were found to comply on policies for academic integrity.

Students and teachers were asked about institutional sanctions or penalties in place for students who plagiarise. The analysis of results in Table 3 shows differences between students’ and teachers’ opinions about punishment for plagiarism. 33% of student respondents believed there would be no consequences and 71% thought only a verbal warning would be given for plagiarising in their assignment, but only 1 teacher from 8 respondents, chose these options. A different picture is seen analysing responses about consequences in case plagiarism should be found in final project or

dissertation: only 4% of student respondents believed there would be no consequences and 6% thought it would result in a verbal warning.

The student and teacher responses to the Question 7: “*What would happen if a student at your institution was found guilty of plagiarism in their assignment or final project/dissertation?*” are summarised in Table 3.

Table 3: Sanctions for plagiarism in HEIs of Estonia

Assignment		Project or Dissertation		Sanction
Student	Teacher	Student	Teacher	
16/33%	1	2/4%	1	No action would be taken
34/71%	1	3/6%	1	Verbal warning
19/40%	2	17/36%	1	Formal warning letter
29/60%	2	14/29%	2	Request to re write it properly
29/60%	6	25/52%	3	Zero mark for the work
16/33%	2	16/33%	2	Repeat the module or subject
16/33%	4	16/33%	2	Fail the module or subject
6/13%	1	15/31%	1	Repeat the whole year of study
7/15%	0	29/60%	2	Fail the whole programme or degree
9/19%	1	11/23%	2	Expose the student to school community
11/23%	1	17/36%	2	Suspended from the institution
11/23%	0	24/50%	0	Expelled from the institution
10/21%	0	15/31%	0	Suspend payment of student grant
9/19%	0	5/10%	0	Other

Most teachers (6 of 8) believed students would be awarded “*Zero mark for the work*” in case of plagiarism in assignments and 3 of 8 in case of plagiarism in final work or dissertation. For plagiarism in assignments this sanction was selected by 60% of students and in cases of plagiarism in final work or dissertation, by 52% of student participants.

Most student respondents believed they would have “*Failed the whole programme or degree*” (60%) or be “*Expelled from the institution*” (50%) for the plagiarism cases in final works or dissertations and appropriately only 15% and 23% of students believed these sanctions in plagiarism cases would apply to assignments. Each one from following sanctions: “*Fail the whole programme or degree*”, “*Expose the student to school community*” and “*Suspended from the institution*” for the plagiarism in final work or dissertation were chosen by 2 teachers.

In the light of the above results from the survey about punishment of plagiarism, answers from students and teachers about possible plagiarism cases in their own and colleagues work are very interesting. The results from the IPPHEAE survey showed that 21% of students and one of 8 teachers positively answered the question “*I believe one or more of my colleagues may have used plagiarised or unattributed materials in class notes*” and 44% of students and 6 teachers said they were not sure about that. 31% of students and 2 of 8 teacher respondents positively answered a related question “*I believe I may have plagiarised (accidentally or deliberately)*”. The answer of 42% of students and 4 teachers to this question was negative and 27% of students and 2 teachers said they were not sure about that (Annex EE-1). Taken on face value, these responses suggest that plagiarism may be relatively uncommon in Estonia. This report returns to the responses to these questions in section 5 when participants’ understanding of plagiarism is explored.

One of the national sources volunteered this comment: “*In Estonia we have cases where teachers have used students work without proper reference. For example: student defended her master thesis and her supervisor used almost the same text as a report for an EU project without mentioning the student or master thesis*”. While hopefully this type of incidence is unusual, the IPPHEAE results indicate that this type of unethical conduct is not confined to Estonia.

The teacher questionnaire Question 6 asked “*who is responsible for monitoring and reviewing policies and procedures for academic integrity and plagiarism*”. Five teachers from 8 participated in the survey showed that for revision of the policies and procedures for academic integrity and plagiarism are responsible “*institutional quality managers*” (1 response) or “*national quality agency*” (4 responses). But according to the Universities Act and Institutions of Professional Higher Education Act, HEIs are responsible for development, monitoring, reviewing and revising of these policies and procedures. For external reviewing and providing of recommendation for revising is responsible the Higher Education Quality Agency during institutional accreditation. These responses show that not all teachers of universities are familiar with legal requirements and practices according monitoring and improvement of plagiarism prevention policies and procedures.

4.2 Staff development

The IPPHEAE surveys included questions about whether more training is needed for staff and students concerning good practice about plagiarism. The responses regarding Continuing Professional Development (CPD) for academic staff about detection and prevention of plagiarism show interest of some respondents to have more training on these issues (3 of 8 teachers answered positively) and 2 teachers said they were not sure about necessity of such training.

4.3 Use of digital tools for aiding academic integrity

Responses from student and teacher questionnaires to the question “*What digital tools or other techniques are available at your institution for helping to detect plagiarism?*” did not specify the kind of software used for text similarities search in student’s written works. Most of respondents indicated they did not know the answer to this question and some made the assumption that it can be Google.

Feedback to the other question “*How are the digital tools used?*” was following: 26 or 54% of students and 5 of 6 teachers, who answered this question, chose “*It is up to the lecturers to decide whether to use the tools*” as it is shown in Table 4. The comments from 7 students choosing “Other” indicated that some students may not be sufficiently familiar with the procedures for checking written work.

Table 4: Use of software tools	Student	Teacher
It is up to the lecturers to decide whether to use the tools	26/54%	5
For some courses students must submit their written work using the tools	6/13%	0
Students must submit all written work using the tools	5/10%	0
Students may use the tools to check their work before submitting	5/10%	1
Other: eg <i>Don’t know, No tools, Not sure</i>	7/15%	0

The more detailed situation about this issue in Estonia was clarified in the process of conducting a case study of practices in selected universities (provided in a separate report from the IPPHEAE project). It was revealed that to date very few universities or academic units used licensed software to aid detection of plagiarism cases mostly in student final work. However some teachers have used open code software or information search tools by keywords.

It is hoped that when the planned database for Estonia has been implemented for storing students’ written work, the 7 participating universities, should start uploading to this repository not only final theses, but also other students’ written works and checking them for authenticity.

4.4 Encouraging a culture of academic integrity

One of the ways to remind students about the necessity for correct use of intellectual property is asking them to sign a declaration about originality of written work and academic honesty. A question was included in student and teacher questionnaires seeking to clarify the situation on this practice: “*When are students required to sign a declaration about originality and academic honesty?*” The answers of students and teachers to this question are provided in Table 5.

Student # (%)	Teacher #	When
10/21%	1	On starting their degree
9/19%	0	For every assessment
11/23%	2	For some assessments
4/8%	2	Never
14/29%	3	Not sure + not able to answer

According to the data provided in Table 5, the highest number of students (29%) chose the answer “Not sure” or “Not able to answer” and 3 of 8 teachers, who participated in the survey also selected this answer. An almost equal number of students chose the other proposed answers “*On starting their degree*”, “*For every assessment*”, and “*For some assessments*”. The teachers’ responses showed little consensus. Looking at the provided answers it appears that Estonian HEIs do not have a common policy on the use of such declarations. However a national respondent added that the correct answer for Estonia was that a declaration is signed “*on the first page of final thesis*”.

Most of the students (83%) said they “*became aware of plagiarism*” before they started their undergraduate/bachelor degree studies and only 15% during their undergraduate/bachelor degree studies. Only one student chose the answer he or she is still not sure about this. But to the question “*when they learned to cite and reference?*”, only 54% of students chose the answer “*Before I started my undergraduate/bachelor degree studies*”, 40% chose the answer “*During my undergraduate/bachelor degree*” and 2 students said they were still not sure about this (Table 6).

26/54%	Before I started my undergraduate/bachelor degree
19/40%	During my undergraduate/bachelor degree
0	During my master’s degree/PhD degree
2/4%	I am still not sure about this

4.5 Student support and guidance

The questionnaires asked students and teachers how students gain necessary information about plagiarism and academic dishonesty (Student Question 6, Teacher Question 2/3). The summarised responses to this question are provided in Table 7.

The students showed that their main sources of information about plagiarism are workshops, classes and lectures. This choice was selected by 60% of students when talking about plagiarism and 69% when talking about other forms of academic dishonesty. The second most prominent information source about plagiarism was web sites (54%) and course booklets, student guides and handbooks (42%) were the most popular choices for other forms of academic dishonesty.

Focusing on responses from teachers, the main sources about plagiarism were workshops, classes and lectures (6 choices from 8 responses) and course booklets, student guides and handbooks (4 choices from 8 responses). Web sites were shown as average or low importance sources of information about plagiarism and academic dishonesty for both students and teachers.

Plagiarism		Academic Dishonesty		
Student	Teacher	Student	Teacher	
26/54%	2	9/19%	3	Web site
18/38%	4	20/42%	4	Course booklet, student guide, handbook
10/21%	2	11/23%	2	Leaflet or guidance notes
29/60%	6	33/69%	2	Workshop / class / lecture
14/29%	1	15/31%	1	From other sources
9/19%	3	9/19%	0	I am not aware of any information about this

A further question on student and teacher questionnaires asked about plagiarism prevention advice for students (Table 8). The analysis shows that usually the academic tutor or lecturer is responsible for discouraging plagiarism and that this guidance is normally conveyed during scheduled classes and lectures. However some responses from students and teachers pointed to other providers of facilities, for example, library, Academic support unit, Academic writing unit or Study skills unit and, at least, university publisher (selected by 17% of students).

Also, Student Question 12, Teacher Question 14 asked: *Which of the following services are provided at your institution to advice students about plagiarism prevention?* The responses are summarised in Table 8.

Student	Teacher	Service or provision
13/27%	2	Academic support unit
31/65%	5	Advice in class during course/module
23/48%	2	Additional lectures, workshops:
24/50%	3	Advice from tutors or lecturers
10/21%	3	Guidance from the library
8/17%	0	University publisher
10/21%	1	Academic writing unit/Study skills unit

5. Perceptions and understanding of Plagiarism

5.1 Reasons for student plagiarism

One of the purposes of the survey was to clarify understanding of participants about what plagiarism is by including a question for all respondents: students, teachers and senior managers to *“Define in one phrase what you understand by the word plagiarism”*. A selection of responses is provided in Table 9.

Analysis of all the statements from (47 of 48) students and teachers provides some insight into their thinking about plagiarism. The most common terms included by students were *using* or *taking* (42%) *work, text, material* (61%) and/or *knowledge, ideas* (23%) and *presenting as your own* (40%). Also mentioned by some are *copying* (21%), *cheating* (8%), *fraud* (4%) and *forging* (2%). 15% of students referred to lack of acknowledgement (eg *not referring* or *without permission*) and 6% said plagiarised text is *word-for-word*, *unchanged* or *without paraphrasing*.

Of the 8 teachers 4 opted for variations on *presenting other people’s work as your own work without giving credit*, two referred to *copying* and two *stealing*. One of the teachers made specific reference to the volume of material (*large proportions*).

Although almost all statements were of relevance, some respondents (teachers included) appeared to have rather limited understanding of the meaning and scope of plagiarism.

Table 9: Understanding of the word “plagiarism”	
Students	<i>Copying other people's works.</i>
	<i>It is copying someone's work.</i>
	<i>Copying other person story word by word.</i>
	<i>Using thoughts and ideas from someone else and not referring them in your own work.</i>
	<i>Using someone else's ideas as your own.</i>
	<i>Presenting an idea of someone else and saying it is yours.</i>
	<i>Plagiarism - presenting someone else work for your own.</i>
	<i>Using other people papers of studies as your own.</i>
	<i>Copying somebody work without giving a notice. Also without changing any sentences.</i>
	<i>Plagiarism is taking credit for someone else's work without permission.</i>
	<i>Using someone else's intellectual property as your own.</i>
	<i>Using other peoples content without referring to it properly</i>
	<i>Using others any kind of work without mentioning the author.</i>
	<i>Presenting someone else's work as your own without giving proper credit to the author.</i>
	<i>It is cheating, taking other people's opinion and phrases.</i>
<i>Cheating in schoolwork</i>	
<i>Stealing someone's creation</i>	
Teachers	<i>Presenting copied work as own work without referring to original author</i>
	<i>Presenting another author's ideas, data, text or presentation as your own.</i>
	<i>Including material from existing sources in own work without proper acknowledgement.</i>
	<i>Presenting large proportions of ideas of other sources as own personal contribution without references.</i>
	<i>Copying or using somebody's intellectual property without refereeing to the source.</i>
<i>Stealing (pointed out by two persons)</i>	

Respondents from all target groups (students, teachers and senior managers) were asked “*What leads students to decide to plagiarise?*” (Student Question 14, and teacher Question 17). The responses from Estonia are summarised in Table 10 and show that opinions differ between students and teachers.

Table 10: Reasons student plagiarise – student and teacher questionnaires		
Student	Teacher	Possible reason for plagiarism
20/42%	4	They think the lecturer will not care
35/73%	6	They think they will not get caught
32/67%	3	They run out of time
20/42%	3	They don't want to learn anything, just pass the assignment:
9/19%	1	They don't see the difference between group work and collusion
34/71%	4	They can't express another person's ideas in their own words
30/63%	0	They don't understand how to cite and reference
22/46%	1	They are not aware of penalties
18/38%	1	They are unable to cope with the workload
28/58%	0	They think their written work is not good enough
17/36%	2	They feel the task is completely beyond their ability
25/52%	7	It is easy to cut and paste from the Internet
19/40%	0	They feel external pressure to succeed
20/42%	3	Plagiarism is not seen as wrong
18/38%	1	They have always written like that
17/36%	1	Unclear criteria and expectations for assignments
20/42%	2	Their reading comprehension skills are weak
24/50%	1	Assignments tasks are too difficult or not understood
12/25%	1	There is no teacher control on plagiarism
9/19%	2	There is no faculty control on plagiarism
17/36%	4	The consequences of plagiarism are not understood

The most common reason for plagiarism according to students of Estonia was *“They think they will not get caught”* (73%). This was the second most popular choice for teachers with *“It is easy to cut and paste from the Internet”* (7 choices from 8 respondents) as the most popular choice. At least 50% of students selected the following reasons for plagiarism: *“They can’t express another person’s ideas in their own words”*(71%), *“They run out of time”*(67%), *“They don’t understand how to cite and reference”*(63%), *“They think their written work is not good enough”*(58%), *“It is easy to cut and paste from the Internet”*(52%) and *“Assignments tasks are too difficult or not understood”*(50%).

Conversely none of the teachers selected *“They don’t understand how to cite and reference”* and *“They think their written work is not good enough”*. Some teachers selected *“They can’t express another person’s ideas in their own words”* (4 choices from 8 respondents), *“The consequences of plagiarism are not understood”* (4 choices from 8 respondents) and *“Plagiarism is not seen as wrong”* (3 choices from 8 respondents). The last option was also chosen by 42% of student participants.

5.2 Understanding academic writing conventions

Several questions were included in the questionnaires for students and teachers as a means of determining how consistently respondents understood concepts relating to plagiarism. In Table 11 are summarised results of responses to question *“What are the reasons for using correct referencing and citation in scholarly academic writing?”* Most students chose the following answers: *“To avoid being accused of plagiarism”* (77%) and *“To give credit to the author of the sourced material”* (67%). The high percentage choosing the first option suggests these students would benefit from more information about use of sources in academic writing.

Percentage	Reason
37/77%	To avoid being accused of plagiarism
27/56%	To show you have read some relevant research papers
32/67%	To give credit to the author of the sourced material
27/56%	To strengthen and give authority to your writing
12/25%	Because you are given credit/marks for doing so
2/4%	I don't know

The responses of students and teachers to the questions about use of some referencing and citation “house style” and confidence in referencing and citation are summarised in Table 12. Most students (63%) and teachers (6 from 8) confirmed that there is a *referencing style students are required or encouraged to use in written work*. However only 25% of student respondents expressed confidence in the skills for referencing and citation.

yes		No		Not sure or not able to answer		Questions
student	teacher	student	teacher	student	teacher	
30/63%	6	4/8%	1	11/23%	1	Is there any referencing style students are required or encouraged to use in written work?
12/25%		19/40%		13/27%		Are you confident about referencing and citation?

Students were asked *“What do you find difficult about academic writing?”* (Student Question 13). The summarised responses are provided in Table 13. The most commonly selected answers were *“Finding good quality sources”* (81%) and *“Paraphrasing”* (60%). However 85% of students selected

at least two options and 23% of student respondents said they found difficulties with all four aspects of academic writing. This response suggests much more guidance and training is needed for students to build skills and knowledge in this area.

Percentage	Difficulty
39/81%	Finding good quality sources
28/58%	Referencing and citation
29/60%	Paraphrasing
23/48%	Understanding different referencing formats and styles

Further questions were included to identify the level of understanding by students and teachers about what plagiarism is. The following situation was described: *“Assuming that 40% of a student's submission is from other sources and is copied into the student's work as described below, indicate your judgement on plagiarism”*. Descriptions of 6 different scenarios about quotation and referencing were provided and students and teachers were asked to categorise the level of seriousness of the case and say whether they would penalise the student for plagiarism.

In reality all six cases in this situation could be categorised as plagiarism, but some cases could be construed as poor academic practice or perhaps patch-writing due to poor language skills could account for some matching. The summarised results of student's choices are provided in Table 14 and teachers choices in Table 15.

Qu 15	Is it plagiarism?				Punishment?	Assuming that 40% of a student's submission is from other sources and is copied into the student's work as described in (a-f) below, indicate your judgement on plagiarism
	This is serious plagiarism	This case is plagiarism	Not sure about this case	This is definitely not plagiarism		
a	34/71%	6/13%	6/13%	1/2%	26/54%	word for word with no quotations
b	4/8%	27/56%	15/31%	1/2%	17/35%	word for word with no quotations, has a correct references but no in text citations
c	3/6%	18/38%	23/48%	3/6%	7/15%	word for word with no quotations, but has correct references and in text citations
d	4/8%	19/40%	19/40%	5/10%	7/15%	with some words changed with no quotations, references or in text citations
e	2/4%	15/31%	25/52%	5/10%	7/15%	with some words changed with no quotations, has correct references but no in text citations
f	1/2%	6/13%	18/38%	22/46%	1/2%	with some words changed with no quotations, but has correct references and in text citations

Qu 19	Is it plagiarism?				Punishment?	Assuming that 40% of a student's submission is from other sources and is copied into the student's work as described in (a-f) below, indicate your judgement on plagiarism
	This is serious plagiarism	This case is plagiarism	Not sure about this case	This is definitely not plagiarism		
A	8	0	0	0	2	word for word with no quotations
B	3	3	2	0	1	word for word with no quotations, has a correct references but no in text citations
C	2	2	4	0	0	word for word with no quotations, but has correct references and in text citations
D	5	2	1	0	1	with some words changed with no quotations, references or in text citations
E	2	2	4	0	0	with some words changed with no quotations, has correct references but no in text citations
F	0	0	5	2	0	with some words changed with no quotations, but has correct references and in text citations

Most students (84%) believed case (a) to be either serious plagiarism or plagiarism with 13% not sure about this and only 2% believing it was not plagiarism. However only 54% of students thought this case deserved punishment. The tolerance of students identifying case of plagiarism grows from case to case (a-f), especially in cases with more or less correct referencing. Case (d) presents a particular concern with only 8% of students recognising that this is at least as serious as case (a) and only 15% believing a penalty is required.

Although all the teachers identified case (a) as a serious case of plagiarism, only 2 of them agreed this case deserves punishment. Most teachers (5 from 8) agreed that case (d) also is serious plagiarism, but 2 of 8 believed it was less serious. Only one teacher saw the necessity for punishment in this case. In other cases teachers demonstrated a more liberal view, chose option “not sure” and did not suggest any punishment.

The analysis of responses in tables 14 and 15 demonstrate some key differences between the views of teacher and student respondents from Estonia about plagiarism compared to views of academics in other parts of the world. Without a consensus on what is acceptable academic practice it is impossible for researchers and scholars to agree and work to a common set of academic rules.

A national respondent provided additional feedback on the values and skills of young teachers just starting their careers: *“Massive use of internet sources start[ed] ~10 year ago. It takes ~10 year to get bachelor, master and doctoral degree. Those teachers who is starting now their work in HEIs, have grown up in context where there were practically no risk to get caught for plagiarism”*.

Of course the views and values of teachers become those of the students they guide.

In responses summarised in Annex EE-1 69% of students and 7 from 8 teachers confirmed *“students received training in techniques for scholarly academic writing”*. At the same time 57% of students and only 3 of 8 teachers agreed they *“would like to have more training on avoidance of plagiarism and academic dishonesty”*. Looking at survey results, particularly the national feedback above, together with Table 14 and Table 15, it seems essential that more training is urgently needed for both students and teachers on understanding and ability to identify cases of plagiarism in practice.

When asked about the use of language translation as a means of plagiarising, a surprisingly high percentage of the teachers (5/8, 62%) and students (57%) either agreed or strongly agreed that this happens, with the balance of 38% of teachers and 42% of the students saying they did not know. This response is in line with answers from most other countries in the EU, suggesting that it may be relatively common for students to plagiarise and avoid detection through this practice.

6. *Proposals to avoid plagiarism and examples of good practice*

The initiative of seven Estonian HEIs to develop a repository for sharing scholarly papers and student work is to be commended. However a recent update from a participant on this development confirmed that *“It took much more time than initially planned. The first promise was winter 2012. Now we have summer 2014 and we still do not have officially working system. The repository is ready and some testing is going on, but the system is not yet integrated into day-to-day HEIs practises”*.

In addition to the delay in the development, there are questions about how it will be implemented. To be effective this resource needs to be applied across higher education in Estonia and beyond and needs to be supported by high quality access tools and search algorithms.

Students and teachers participating in the survey were asked in the questionnaire to provide *“any suggestions or ideas on how to reduce student plagiarism (you may describe any examples of good practice followed at your institution concerning plagiarism detection and prevention)”*. Some useful responses from students and teachers are provided below.

18 students or 38% of student participants provided some very interesting proposals, which could be brought under three groups and are worth considering by administration of HEIs:

1. It is desirable to raise awareness about plagiarism and improve teaching, training and consulting about how to avoid it: *“Raise the awareness about plagiarism”* (proposed 3 students), *“Raise awareness and repeat the requirements often through different subjects”*, *“To teach and speak about that topic”*, *“Learn more books and provide teacher’s help”*, *“Provide students with good sources of information”*, *“Organise Workshops”*, *“Provide more practice”*, *“Help students understand, what it is and how to do work easier”*, *“Inform students and give courses how to refer, because in most cases student do not know that they have done something wrong”* and *“Improve instructions of reference and citation should be understandable and available for everyone. Usually they are quite hard to understand”*.
2. It is desirable to provide more information about penalties and to strengthen control: *“Make sure there are severe penalties”*, *“Warning the students about what will happen afterwards if they use materials that are not their own”* and *“Making more control”*.
3. Improve the study process, student experience and tasks for assignments: *“Make learning meaningful”*, *“The main reason for plagiarism is coming from sudden workload increase in really different topics, which increases plagiarism. It seems, that nobody takes cares about student's stress level and even after that teachers justify themselves”* and *“Let people come up with their own ideas and stop pushing the fact that every written assignment has to have a bunch of other people's thoughts in it”*.

Only 2 teachers from 8, provided suggestions and both comments aligned with the last group of proposals provided by students: *“Finding exercises where copying from the internet does not help”* and *“Giving problems (for assignments), where insight but not so much copying is needed; giving new problems, where there is not enough material available for word for word copying”*.

As in many other countries across the world, the popular press appears to be acting as a catalyst for change in alerting the public about the threats to academic standards brought about by ignoring or condoning academic misconduct, and specifically plagiarism. According to a national source: *“The good thing is that general public is seeing plagiarism as very serious wrong doing. Read for example editorial column from the biggest Estonian newspaper Postimees”* (Tartu Postimees Editorial 30th May 2014). The article (available on-line in English) concerns suspicions of “academic theft” relating to a doctoral thesis submitted to Tallinn University of Technology. When challenged, the author withdrew her work, resulting in no follow-up investigation or penalty.

7. Discussion

The documentary research revealed requirements in Estonia for higher education institutions to establish policies for academic integrity and for the national quality agencies to include oversight of the institutional policies as part of the accreditation process. However no evidence was found that institutional policies had been developed in Estonia that are effective for discouraging, preventing or detecting plagiarism.

Even more concerning was the claim by some vice-rectors that there were no cases of plagiarism in their institutions. An HEI anywhere in Europe that had no student plagiarism would be highly

exceptional and make an interesting case study. It is more probable that these institutions had not been looking for cases of plagiarism and misconduct, not recognising plagiarism or dishonesty when it arose or may have an overly lenient view of what was acceptable scholarly practice. The limited survey responses make it impossible to know how prevalent this mind-set is within institutions.

Although the vast majority of the surveyed students indicated that they learned about plagiarism before they started their undergraduate studies or during the study, most of them were not able to identify clear cases of plagiarism. Some of the teachers also failed to identify and categorise plagiarism. There was clear evidence from the responses to the plagiarism scenario questions of reluctance to apply sanctions to penalise cases of student cheating and for deterring academic misconduct.

Responses from teachers and students about consistency within institutions on application of penalties and policies were divided. Lack of knowledge about many aspects of policies for plagiarism and academic misconduct from the respondents suggests poor communication about these issues within and between institutions.

Some of the student and teacher participants positively highlighted the necessity for more training for both staff and students concerning good practice about academic writing and avoiding plagiarism. It is important to focus training not only on the mechanistic rules of academic writing, but also to discuss the possibility to improve existing teaching and training practice in HEIs on this issue by including new topics, for example, legal regulation of intellectual property use, properly use of intellectual property, respect of copyright, styles of referencing, negative impact of plagiarism on students competences, pedagogic and assessment practices that help to “design out” plagiarism.

Students and teachers surveyed were aware of resources and activities for learning about plagiarism and academic dishonesty. However the results from this small survey in Estonia suggest that teachers and students realise much more could and should be done to help students to adopt more scholarly practices and to more appropriately include academic sources in their writing and study.

As far as can be ascertained, other than the IPPHEAE survey, no research has been conducted in Estonia into policies for academic integrity. It would be a great asset to the Estonian education department, quality agency and for HE institutions to know how generally the IPPHEAE survey results apply across all institutions in Estonia.

The proposals from student participants on ways to discourage plagiarism demonstrate how seriously students view this problem. It is believed that motivated students can help teachers and HEIs administration in identifying the main reasons for plagiarism in a particular HEI or faculty, and help to explore ways to avoid these phenomena, in generating ideas on motivating other students to be honest, avoid plagiarism and in solving other important study quality problems.

8. Recommendations for Estonia

8.1 Nationally

- 8.1.1 Ideally the creation of repositories for collection and storage of students’ written works need to be financially supported by state as this will require a great deal of time, effort and financial resources that precludes HEIs providing financing of these activities from their own resources.
- 8.1.2 Improvement of legal regulation is required for encouraging the development and use of digital text matching tools in HEIs. All HEIs around the country should be given access to the collected documents for matching to newly uploaded student work. This provision will help to deter reuse of written work prepared by students in other HEIs.

- 8.1.3 To encourage good practice the national government should consider commissioning detailed research into plagiarism and academic integrity policies in Estonian HEIs for bachelor level and above, perhaps making use of the IPPHEAE survey tools.
- 8.1.4 As part of a fact-finding exercise the national government should consider more detailed monitoring the operation of institutional policies for maintaining academic integrity and keeping statistics on the incidences of plagiarism and academic misconduct at all levels of higher education.
- 8.2 *Institutionally*
- 8.2.1 It is recommended that institutions more clearly define their penalties for plagiarism and describe examples of cases when these penalties were applied.
- 8.2.2 Fair and consistent procedures should be developed for handling allegations, maintaining oversight and punishment of plagiarism. Procedures for hearing student appeals should be prepared, adopted and made accessible to students and teachers.
- 8.2.3 HEIs in Estonia are advised to organise discussions with participation of academic staff and motivated students about:
- reasons why students are plagiarising;
 - difficulties that students face when preparing written work;
 - ways of improving the teaching and training processes on avoiding plagiarism;
 - expanding existing and including new topics covered when guiding students about plagiarism issues and choosing the most suitable teaching methods;
 - improvement of students' time planning during the study process.
- 8.2.4 HEIs in Estonia should apply more effort to improve teaching and training for students on correct academic writing, citing and referencing and understanding the essence of formal requirements by:
- analysing how students understand what it is “plagiarism”;
 - explaining to students not only the rules of citing and referencing, but also legal aspects of preservation of intellectual property and copyright;
 - as much as possible making use of typical and specific examples in the training process;
 - checking students' abilities to recognise cases of correct citing and plagiarism.
- 8.2.5 It is advised that institutions become engaged in academic staff development, because many of the teachers who responded would welcome and benefit from training and discussions about plagiarism and effective ways to recognise it.
- 8.2.6 Institutions should make more visible their information about services available for students and teachers on avoiding plagiarism. Students should be able to consult those responsible for provision of services on plagiarism prevention, especially when teachers or supervisors are not available.
- 8.2.7 Institutions are advised to develop a system of monitoring teachers' work on clear use of procedures for fair handling of allegations and maintaining oversight when applying penalties. The academic community should be familiarised regularly about results of such monitoring and invited for discussion on this issue.

8.3 *Individual academics*

- 8.3.1 Teachers are advised to provide advice and guidance to students on aspects of academic writing, internet addresses and other sources of information on requirements for citing end referencing, policies and guidance about sanctions and consequences for academic misconduct, services, available inside the institution on these issues, details of internal departments and individuals responsible for provisions of these services.
- 8.3.2 Teachers should to pay more attention to explaining requirements for written work, expectations for results and criteria for evaluating the quality of this work, because 50% of student respondents stated that one of the main reasons for plagiarism in student work was that the assignment task was too difficult or not understandable.
- 8.3.3 Teachers should be more principled in applying penalties according to the regulations and to precisely follow procedures for punishments because according the survey 73% of students think *they will not get caught* and 25% believe *there is no teacher control on plagiarism*.

9. *Conclusions*

The low number of responses to the IPPHEAE survey makes it impossible to understand the full situation across Estonia, but this analysis provides some insight. There is currently no effective national oversight for institutional policies on academic integrity in Estonian HEIs. The lack of statistical data on plagiarism and misconduct cases in student work institutionally and nationally makes it impossible to know whether plagiarism and other forms of cheating are being appropriately and consistently addressed, but the reluctance of some institutions to engage with the survey coupled with the IPPHEAE results suggest a very immature approach is being adopted in many institutions.

The moves by some institutions to develop a digital repository of academic sources are to be commended, but more national coordination and support is needed to ensure the resulting resources are comprehensive and accessible to all institutions, nationally and, in time, internationally through the provisions of suitable digital tools. The tools will gradually develop the capacity help to plug the gap in access to resources in the Estonian language. However in the longer term the search tools need to have access to a much wider range of resources via the Internet and also material available in different languages.

Different answers provided by students and teachers to the question about sanctions that could be applied when plagiarism is found in student work show there are no common rules on penalising plagiarism and procedures for applying these sanctions known by all members of the academic community. This unfair situation for students and teachers needs to be urgently addressed by institutions.

There were indications that much more access to information and training is needed for both teachers and students on good academic practice and the consequences of academic misconduct.

It is important for the key players in Estonian higher education to seriously question whether they are allowing academic standards to be eroded by the prevalence of different forms of unchecked student plagiarism, facilitated through the global digital economy. Particularly, the analysis of the research generated no confidence that Estonian academics appreciated the ease with which



students can acquire or purchase essays and solutions via the World-Wide Web or evade detection through us of sources in different languages.

The IPPHEAE researchers are very grateful to individuals and institutions from Estonia that participated in the survey. Researchers, educationalists and academics interested in contributing directly to further research are advised to contact members of the project team.

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Annex EE-1: Responses to Question 5

Table 16: Student and teacher responses to questionnaire Question 5												
Statement	1. Strongly Disagree		2. Disagree		3. Not sure		4. Agree		5. Strongly Agree		6. Not applicable	
	S	T	S	T	S	T	S	T	S	T	S	T
Students receive training in techniques for scholarly academic writing (s5a; t5a)	0	0	8/ 17%	0	7/ 15%	1	26/ 54%	3	7/ 15%	4	0	0
This institution has policies and procedures for dealing with plagiarism (s5c; t5b)	0	0	5/ 10%	0	7/ 15%	1	16/ 33%	6	20/ 42%	1	0	0
I believe this institution takes a serious approach to plagiarism prevention (t5c)	-	0	-	0	-	2	-	4	-	2	-	0
I believe this institution takes a serious approach to plagiarism detection (t5d)	-	0	-	1	-	2	-	4	-	1	-	0
Plagiarism policies, procedures and penalties are available to students (s5d; t5e)	0	0	4/ 8%	0	10/ 21%	1	23/ 48%	6	11/ 23%	1	0	0
Plagiarism policies, procedures and penalties are available to staff (t5f)	-	0	-	0	-	1	-	6	-	1	-	0
Penalties for plagiarism are administered according to a standard formula (s5e; t5g)	1/ 2%	0	5/ 10%	0	17/ 35%	5	17/ 35%	2	8/ 17%	1	0	0
I know what penalties are applied to students for different forms of plagiarism and academic dishonesty (s5f; t5h)	1/ 2%	0	6/ 13%	2	15/ 31%	0	16/ 33%	4	10/ 21%	2	0	0
Student circumstances are taken into account when deciding penalties for plagiarism (s5g; t5i)	1/ 2%	0	7/ 15%	0	26/ 54%	4	9/ 19%	2	3/ 6%	2	2/ 4%	0
The penalties for academic dishonesty are separate from those for plagiarism (t5j)	-	0	-	2	-	3	-	1	-	2	-	0
There are national regulations or guidance concerning plagiarism prevention within HEIs in this country (t5k)	-	0	-	1	-	6	-	0	-	1	-	0
Our national quality and standards agencies monitor plagiarism and academic dishonesty in HEIs (t5l)	-	0	-	1	-	6	-	0	-	1	-	0
The institution has policies and procedures for dealing with academic dishonesty (s5h; t5m)	1/ 2%	0	3/ 6%	0	7/ 15%	2	27/ 56%	4	10/ 21%	2	0	0
I believe one or more of my teachers/colleagues may have used plagiarised or unattributed materials in class notes (s5i; t5n)	2/ 4%	0	14/ 29%	1	21/ 44%	6	7/ 15%	1	3/ 6%	0	1/ 2%	0
I have come across a case of plagiarism committed by a student at this institution (s5j)	6/ 13%	-	16/ 33%	-	8/ 17%	-	14/ 29%	-	3/ 6%	-	1/ 2%	-
I believe I may have plagiarised (accidentally or deliberately) (s5k; t5o)	7/ 15%	0	13/ 27%	4	13/ 27%	2	15/ 31%	2	0	0	0	0
I would like to have more training on avoidance of plagiarism and academic dishonesty (s5b; t5p)	1/ 2%	1	7/ 15%	2	7/ 15%	2	23/ 48%	3	10/ 21%	0	0	0
I believe that all teachers follow the same procedures for similar cases of plagiarism (s5l; t5q)	4/ 8%	0	7/ 15%	3	25/ 52%	1	9/ 19%	3	3/ 6%	1	0	0
I believe that the way teachers treat plagiarism does not vary from student to student (s5m; t5r)	3/ 6%	0	7/ 15%	2	17/ 35%	0	17/ 35%	5	4/ 8%	1	0	0
I believe that when dealing with plagiarism teachers follow the required procedures (s5n; t5s)	3/ 6%	0	3/ 6%	3	13/ 27%	0	22/ 46%	4	6/ 13%	1	1/ 2%	0
It is possible to design coursework to reduce student plagiarism (s5o; t5t)	0	0	2/ 4%	0	16/ 33%	2	18/ 38%	3	12/ 25%	3	0	0
I think that translation across languages is used by some students to avoid detection of plagiarism (s5p; t5u)	0	0	1/ 2%	0	20/ 42%	3	21/ 44%	4	6/ 13%	1	0	0
The previous institution I studied was less strict about plagiarism than this institution (s5q)	2/ 4%	-	7/ 15%	-	11/ 23%	-	12/ 25%	-	6/ 13%	-	10/ 21%	-
I understand the links between copyright, Intellectual property rights and plagiarism (s5r)	1/ 2%	-	4/ 8%	-	14/ 29%	-	18/ 38%	-	11/ 23%	-	0	-