Impact of Policies for Plagiarism in Higher Education Across Europe: Results of the Project

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IMPACT OF POLICIES FOR PLAGIARISM IN HIGHER EDUCATION ACROSS EUROPE: RESULTS OF THE PROJECT

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Abstract

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Exploring policies and systems for assuring academic integrity and deterring plagiarism in different higher education institutions was the subject of a three-year project funded by the European Union (EU). The research for Impact of Policies for Plagiarism in Higher Education Across Europe (IPPHEAE), completed in November 2013, was conducted by teams at five higher education institutions from UK, Poland, Lithuania, Cyprus and Czech Republic.
The research included an EU-wide survey of higher education institutions across 27 EU member states. Separate reports were prepared for the countries surveyed, each containing details of findings and recommendations for what could and should be done to improve academic quality and integrity at national, institutional and individual levels. An EU-wide comparative study provided an assessment of the maturity of policies and processes for academic integrity in each country, based on the data collected and the research conducted for each national report.
This paper presents selected comparisons of results from the research, especially looking at evidence for maturity of policies, consistency of approach, examples of good practice and highlighting where serious effort is needed to strengthen current policies and practices.

Keywords: plagiarism, academic integrity, European Union, plagiarism policies, AIMM

INTRODUCTION

The project Impact of Plagiarism in Higher Education Across Europe (IPPHEAE) was funded by the European Union's Lifelong Learning Programme and operated between October 2010 and September 2013. The authors were the project leader (Irene Glendinning, Coventry University, UK) and coordinator for one of the partners (Tomáš Foltýnek, Mendel University in Brno, Czech Republic). Other partners were University of Nicosia, Cyprus, Technical University of Lodz, Poland and Aleksandras Stulginkis University, Lithuania.

This project aimed to establish how the difficult and growing problem of student plagiarism was being tackled by Higher Educational Institutions (HEIs) across the European Economic Area and beyond. The research included a survey of higher education institutional across EU countries that explored different aspects of policies and procedures for detecting and handling cases of student plagiarism and academic misconduct.

The knowledge gained from this survey was one of the most important outputs of the larger IPPHEAE project, because it provided evidence for meaningful comparison of HEIs within one country and also between all the countries surveyed. The survey helped to identify case studies for the second part of the project, including examples of good practice and studies of interventions to improve existing practices.

LITERATURE REVIEW

Although a much research has been conducted in the UK and parts of Europe into policies for plagiarism and aspects of academic dishonesty such as research fraud, this is the first time an EU-wide survey has been completed on this subject. The IPPHEAE research design was influenced by much of the earlier research.

The UK leads Europe in the extent and scope of research and publication in the wider related domain of academic integrity that began about the year 2001. Carroll and colleagues devised and evaluated a holistic institutional response to plagiarism for Oxford Brooks University, which influenced policies in HE institutions across the UK and beyond (for example Carroll and Appleton, 2001; Park, 2004; Carroll, 2005; MacDonald and Carroll, 2006 and Morris and Carroll, 2011).

Studies focusing on linguistic aspects of plagiarism and second language study have been published by researchers from the UK (Borg 2009) and Sweden (Pecorari and Shaw, 2012). Some authors focused specifically on providing guidance and advice on different approaches for deterring plagiarism (for example Neville, 2007; Hayes and Introna, 2005; Moore, 2008; Ireland and English, 2011; Davis, 2011).

The initiation of the IPPHEAE project was particularly inspired by two JISC funded projects. The JISC Electronic Plagiarism Project (Rowell, 2009) was instrumental in introducing digital text matching tools across UK higher education, which led to transformations in academic integrity policies in many HEIs. The AMBeR project surveyed UK HEIs exploring sanctions applied for plagiarism (Tennant and Duggan, 2008) and devised a plagiarism tariff (Tennant and Rowell, 2010), which has been adopted and adapted by many UK HEIs.

Research teams in many parts of Europe have been developing language corpuses and digital tools for storing and searching academic sources in different European languages (including Larsson and Hansson, 2012 and Applegren *et al.*, 2012 (Sweden), the Kopi tool (Hungary)). Several teams from Czech Republic and Slovakia presented their research into search algorithms at the IPPHEAE Project Conference in Brno in 2013 (including Chuda *et al.*, 2013; Sousa-Silva, 2013; Veselý and Kolomazník, 2013). The IPPHEAE project included development of a digital tool ANTON intended for Lithuania that was implemented in Czech HEIs. The original intention – to create digital repository of theses together with plagiarism detection tools – was not fulfilled due to lack of interest of some particular Lithuanian HEIs. Therefore the project team decided to implement ANTON as a part of the University information system. This tool was then used at Mendel University in Brno.

Other research mainly from Anglophone countries has also been a great influence on the IPPHEAE project, particularly the work of Bretag and colleagues in research into policies in Australia (2011) and the important surveys conducted by McCabe to explore cheating in the USA (2005).

METHODOLOGY

The IPPHEAE survey was designed to investigate policies for assuring academic integrity in higher education. Participants from all member states of the EU helped to provide understanding of the current "state of play" across Europe. There was no restriction in terms of subject focus of survey participants. However the survey was aimed at policies for academic integrity at bachelor and master's degree level rather than doctoral, post-doctoral and research activities.

For each participating HEI the survey was designed to:
- Find out the level of awareness and understanding about plagiarism.
- Establish the current situation regarding current policies, procedures and processes for preventing, detecting and penalising cases of student plagiarism.
- Determine how effective the current set-up is at preventing plagiarism at bachelor and master's level.
- Explore where responsibilities lie for establishing and updating procedures.
- Capture specific language or subject issues affecting plagiarism prevention or detection.
- Identify opportunities for case studies, either to share examples of good practice or to implement some new measures and study the effect.

Three distinct questionnaires were designed for different groups of respondents:
- students,
- teachers,
- senior management.

Further data was collected at institutional and national level by use of structured interviews (face-to-face and by Skype), student focus groups and through documentary evidence and web-based resources. Common questions were included at the different levels to allow comparison of different responses about the same issue across the different levels.

Questionnaire data was coded automatically through the administration tools with the on-line platform tool (Bristol On-line Surveys) and then manually to record the institution code and country of study/work. The data was reorganised from the 14 language sets according to the country of study (students) or work (teachers and managers). Qualitative data was translated to English as required.

Much of the analysis of quantitative data was by use of frequency distributions, to facilitate simple comparison between country data sets. Thematic analysis was used to analyse some of the key qualitative responses.

For many purposes, just simple statistic methods are enough. For more complex analysis, a tool called the Academic Integrity Maturity Model (AIMM) was developed by the project leader for quantifying and comparing the maturity of processes and systems observed through survey responses from different countries. AIMM consists of 9 criteria:

- Transparency in academic integrity and quality assurance.
- Fair, effective and consistent policies for handling plagiarism and academic dishonesty.
- Standard range of standard sanctions for plagiarism and academic dishonesty.
- Use of digital tools and language repositories.
- Preventative strategies and measures.
- Communication about policies and procedures.
- Knowledge and understanding about academic integrity.
- Training provision for students and teachers.
- Research and innovation in academic integrity.

The values for particular criteria were constructed from a combination of survey responses to related questions and other relevant information and feedback. Each criterion was represented by a real number in the range 0 (low maturity) to 4 (high maturity).

RESULTS AND DISCUSSION

Analysis shows differences between countries. We will explore the most significant results from student surveys. For the purpose of this paper, we are going to examine just the data from the student survey and we will focus on four indicators:

1) Training: Do students receive training about academic writing and plagiarism?
2) Policies and procedures for handling plagiarism: Do they exist and are they effective?
3) Have respondents experienced plagiarism: Committed by themselves, by his/her colleague or his/her teacher?

4) Judgement on plagiarism. Given a concrete situation, is it considered as plagiarism?

It must be noted that although the results analysed below are based on almost 4000 student responses the number of student responses collected for some countries was very low. Therefore, although included for completeness in the discussion below, the results may not be considered representative for Hungary (5), Luxembourg (1), Sweden (7) and Italy (5). No responses were received from students studying in Belgium or Netherlands. These countries are omitted in the comments of charts below.

Another element of bias that must be taken into account when interpreting the results is that participation was voluntary for institutions and individuals. Many institutions contacted refused to allow staff or students to participate for (unfounded) fear of reputational damage on the grounds that their policies were weak or absent. This implies that those people who did respond are likely to have presented a more positive picture than may be the case generally for the country as a whole.

Training About Plagiarism

Chart in Fig. 1 presents the responses for the following question: I have received training in techniques for scholarly academic writing and anti-plagiarism issues. There were 5 possible answers (strongly agree, agree, not sure, disagree and strongly disagree). We have merged strongly agree and agree together and strongly disagree and disagree together.

We can see great differences between countries. More than 75% of students said they received training in Austria, Greece, UK and Finland. On the opposite side we can see countries where less than one third of students received such training: Bulgaria, Czech Republic and Poland. However some Eastern countries are among the higher ranking countries (Estonia, Slovenia, Slovakia) and training appears to be less common in some Western countries (Portugal, Spain, France).
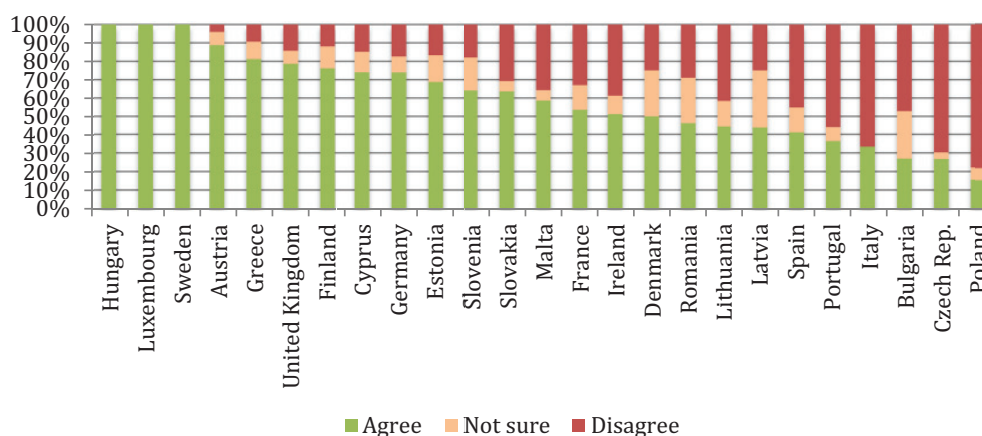
1: *I have received training in techniques for scholarly academic writing and anti-plagiarism issues*
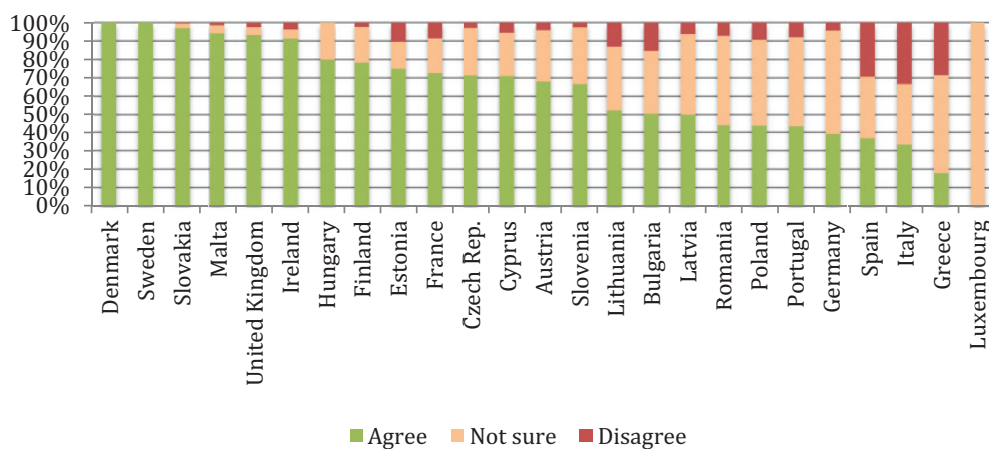
Policies and Procedures

Responses on question about the existence of policies and procedures at particular institution are presented by a chart in Fig. 2. The range of possible answers was the same as in previous question.

We can see that there are countries where almost all of the students are convinced that their institution has policies and procedures for dealing with plagiarism (Slovakia, Malta, UK, Ireland), whereas in Greece this number is less than 20%. When we look deeper at the relationship between training and existence of policies, we could see that those who answered yes to this question, more likely answered yes to previous question.

So we can confirm not surprising conjecture that at institutions with policies and procedures for dealing with plagiarism students are more likely to receive appropriate training. This can be seen from the radar chart in Fig. 3.

However the answer to this question does not tell us anything about whether the policies are applied correctly, fairy and consistently and are effective for penalising, deterring and preventing academic dishonesty. We combined this question with two more:
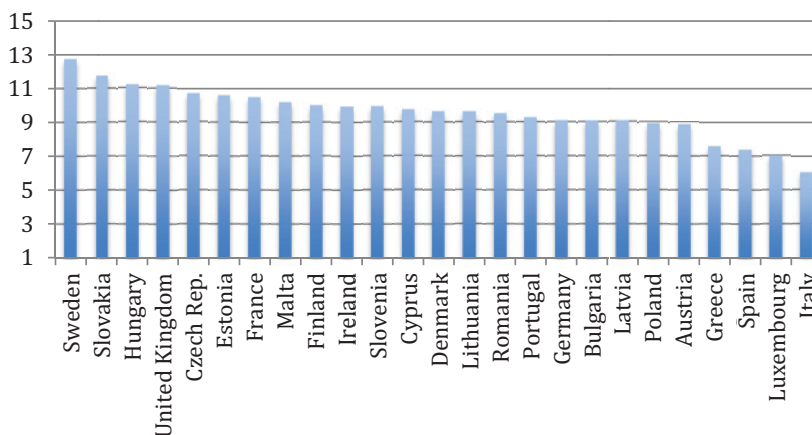
● I know what penalties are applied to students for different forms of plagiarism and academic dishonesty.

2: *The institution where I now study has policies and procedures for dealing with plagiarism*
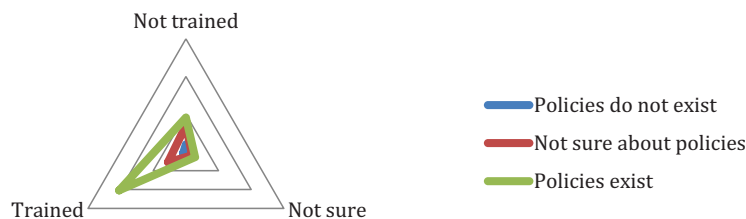
3: *Students receiving training in relationship with the existence of policies and procedures for dealing with plagiarism*

4: *Policies for plagiarism exists, are known and effective*

● I believe that all teachers follow the same procedures for similar cases of plagiarism.

Each answer was evaluated (1 = strongly disagree, 2 = disagree, 3 = not sure, 4 = agree, 5 = strongly agree), these three numbers were summed for each respondent and an average was counted for each country. Results are in Fig. 4.

As we can see, order of countries changed slightly, but the differences are not so significant.

Have Respondents Experienced Plagiarism?

The following three questions provide evidence of experiences of plagiarism:
● I believe I may have plagiarised (accidentally or deliberately).
● I have come across a case of plagiarism committed by a student at this institution.
● I believe one or more of my teachers may have used plagiarised or unattributed materials in class notes.

First question is asking about the plagiarism committed by the respondent, second question is about general knowledge about any case of student plagiarism and third one is about honesty of teachers (from the point of view of the responding student). Results can be seen in Figs. 5–7.

As we can see in Fig. 5, there are students admitting their own plagiarism and some who deny this, but it is impossible to know whether all respondents were honest. The highest percentages of students who admitted to plagiarism were in Lithuania, Greece and Romania (more than 50%). However in the Czech Republic, Germany, Latvia, Slovakia and Slovenia this number is less than 15%.

Surprisingly, Fig. 6 shows that many students who claimed not to have plagiarised themselves agreed that they had encountered a case of plagiarism committed by another student. More than 50% of students had this experience in Slovakia, Lithuania, Latvia, Czech Republic and Greece. Less than 30% of students in Cyprus, Malta, Austria and Finland said they had met cases of plagiarism.

When we look at students' judgement about teachers, the highest rates of teachers' plagiarism is in Latvia, Lithuania, Greece and Malta. The most honest teachers according to the students' views are in Ireland, Romania, Spain, UK and the Czech Republic.
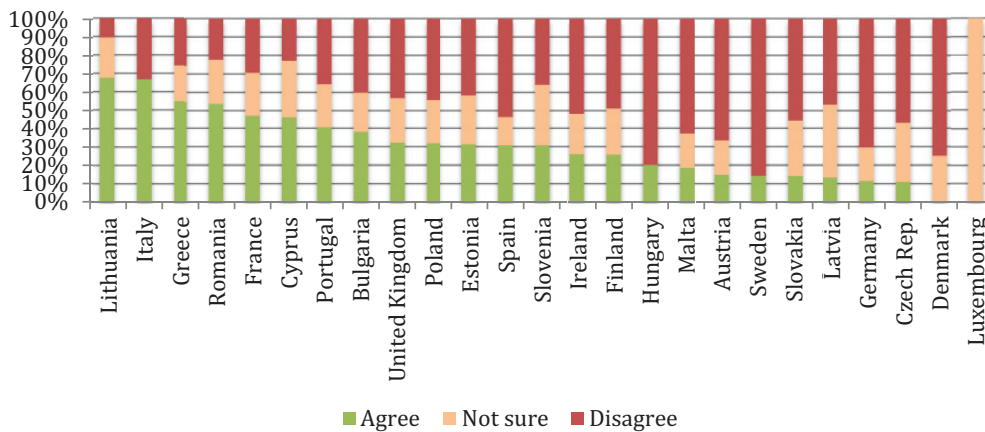
5: *I believe I may have plagiarised (accidentally or deliberately)*
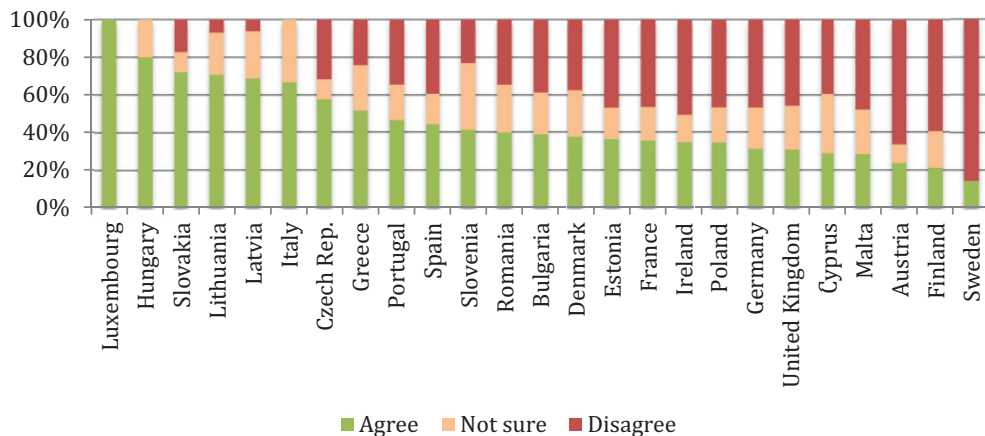
6: *I have come across a case of plagiarism committed by a student at this institution*
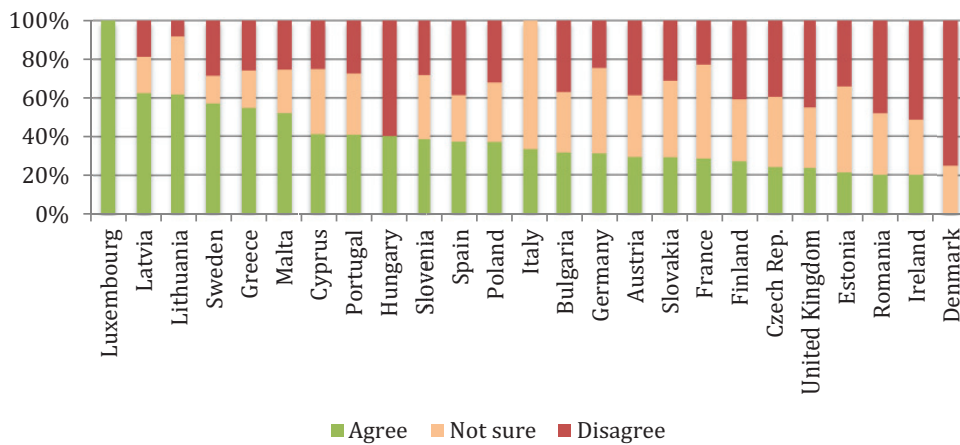
7: *I believe one or more of my teachers may have used plagiarised or unattributed materials in class notes*

The value of students' views on these questions depends to some extent on their understanding of what constitutes plagiarism.

Judgement on Plagiarism

One very interesting question in the survey was about the judgement about what is plagiarism:

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 by ticking one of the boxes in the first four columns.
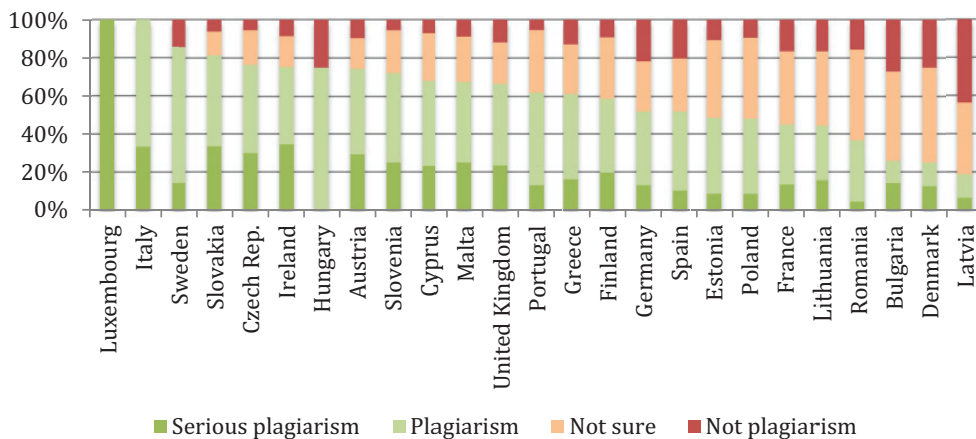
There were four possible answers: *This is serious plagiarism; this is plagiarism; not sure about this case; definitely not plagiarism.* We have chosen two out of
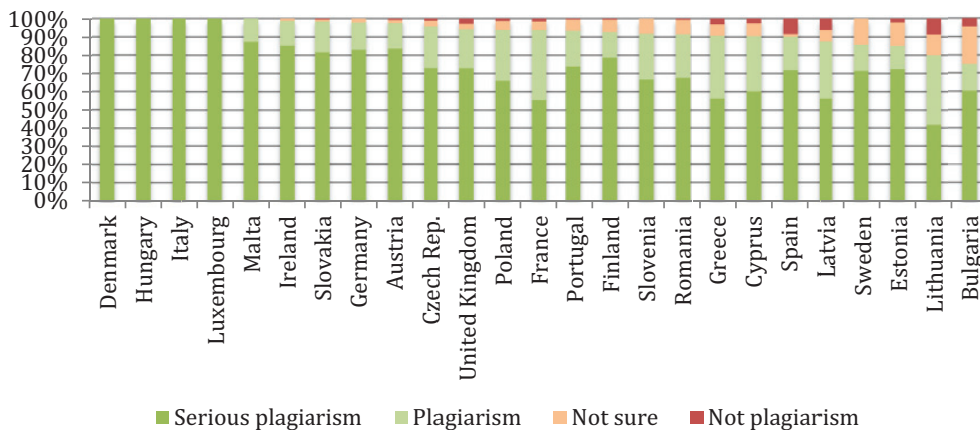
8: *40% copied word for word with no quotations*

9: *40% copied with some words changed with no quotations, references or in text citations*

the six options: word for word with no quotations (see Fig. 8) and with some words changed with no quotations, references or in text citations (see Fig. 9).

The first scenario (chart in Fig. 8) was seen by most respondents as a very clear case of plagiarism, although, in Bulgaria more than 20% of students believed this was not plagiarism. The second scenario described a potentially more serious case because the student appears to have tried to hide his/her plagiarism. However, in all countries, the students were less convinced about this case. Students from Latvia, Bulgaria, Romania, Lithuania and France were least likely to believe it was plagiarism, compared to Slovakia, Czech Republic, Ireland, Austria and Slovenia, where the majority of students correctly said it was plagiarism.

Unfortunately, no general correlation was evident between responses for training and judgement. This finding implies that the training provided on academic writing and plagiarism does not appear to have helped students to improve their judgement about these cases.

Academic Integrity Maturity

In order to compare different EU countries surveyed for IPPHEAE it was established that it would be useful to try to quantify the *maturity* of policies and procedures using the survey results and other evidence from the research. However, it

became clear that the evaluation would depend on many different factors. Therefore the project leader developed the Academic Integrity Maturity Model (AIMM), inspired by Carnegie Mellon's Capability Maturity Model (CMMI). AIMM combines many questions from the survey, includes all levels of survey responses and also incorporates relevant data from other sources, based on nine separate criteria, each in the range 0–4.

The graph in Fig. 10 compares the AIMM scores for each country, depicting each criterion and the total score (sum of the scores for the nine criteria), giving a maximum possible score of 36.

A spider chart has been constructed for each country using the same the metrics to show strengths and weaknesses of policies in each country. Spider charts for UK and Bulgaria are included here as examples (charts in Figs. 11 and 12).

Comparing Responses from Teachers and Students

There are very interesting results when we compare students' and teachers' responses. Foltýnek, Rybička and Demoliou (2013) discussed these differences:

● Students are informed about plagiarism primarily from the web and not through lecturing or from teachers' guidance notes.
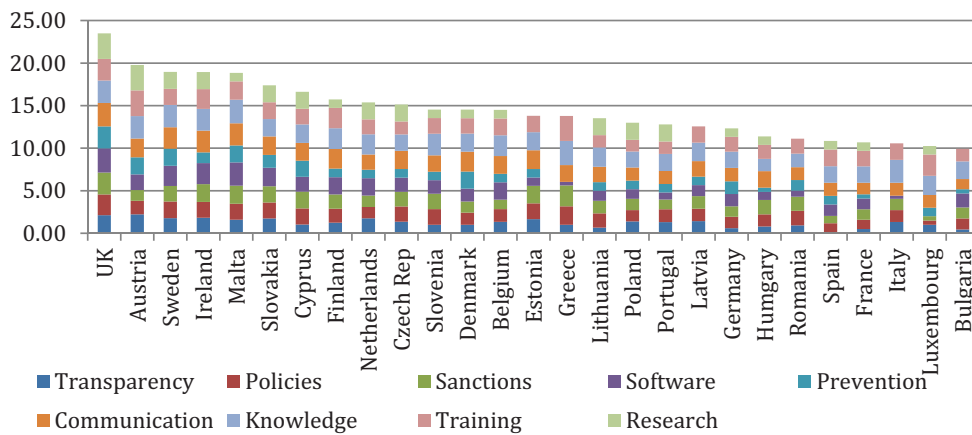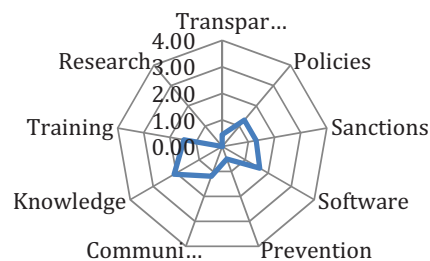

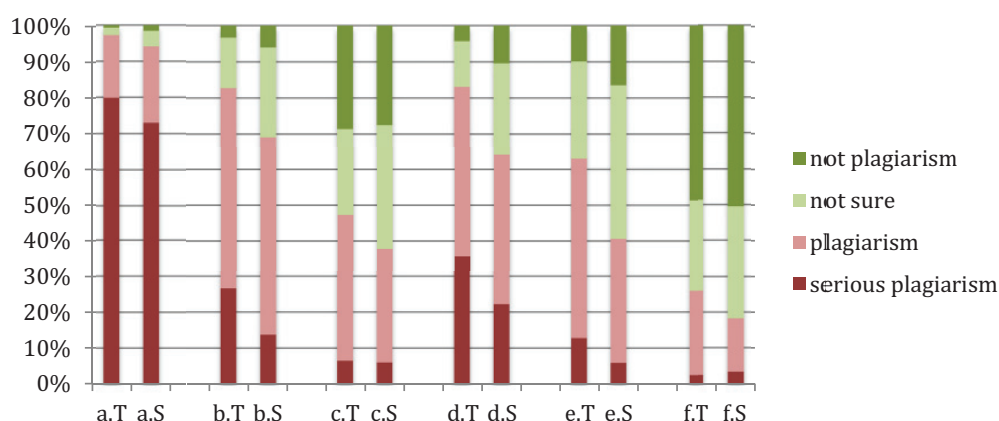10: *AIMM scores for 27 EU countries (Glendinning et al., 2013)*

AIMM UK
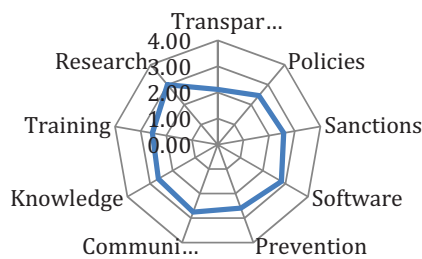
11: *Spider charts of AIMM scores for UK (Glendinning et al., 2013)*

AIMM Bulgaria

12: *Spider charts of AIMM scores for Bulgaria (Glendinning et al., 2013)*

13: *Teachers' and students' verdicts on plagiarism*

Verdicts (serious plagiarism, plagiarism, not sure, not plagiarism) was requested for when 40% of an assignment is copied word for word and: (a) has no quotations; (b) has no quotations but has correct references without in-text citations; (c) as in (b) but with in-text citations; (d) has some words changed but no quotations, references or in-text citations; (e) has some words changed, no quotations or in-text citations but has references; (f) has some words changed, no quotations but has in-text citations and references. (Foltýnek *et al.*, 2013)

- The most difficult aspect of academic writing for students is finding a good quality source for information retrieval rather than referencing.
- Most teachers misunderstand students' reasons for resorting to plagiarism.
- More teachers than students give a verdict of plagiarism for work that is plagiarized.
- Teachers' and students' opinions on plagiarism policies/procedures and on penalties do not agree.

This paper also pointed to evidence that teachers have a stricter view of what constitutes plagiarism than students. When given the six specific scenarios describing potential plagiarism that we referred to earlier (see Fig. 13), teachers are more likely to judge cases as plagiarism than students.

Differences Between "West" and "East"

Some interesting differences emerged when responses from European countries, with a longer tradition of democracy and academic integrity ("western"), were compared to responses from eastern European countries that were formerly under the influence of the Soviet Union ("eastern"). These differences were described by Foltýnek and Rybička (2013), we are going to present just the summary of the most important findings here.

In HEIs in western countries the provision of training in academic writing skills is much more common than in the east. However students in western countries are more likely to be accused of plagiarism than their eastern counterparts, not because plagiarism is more prevalent in the west, but because more resources are devoted to detecting plagiarism in western HEIs.

This difference can be illustrated by the example of question part (a) that *40% of student's work copied word for word with no quotations; no references and no in-text citations*, taken overall the majority of the student respondents were convinced this was serious plagiarism. However, in most parts of Eastern Europe the rate of agreement about this fact was much lower than in Western Europe (see Tab. I)

I: *Judgement on plagiarism in "western" and "eastern" EU countries (Foltýnek & Rybička, 2013)*

	EU	EU E	EU W
This is serious plagiraism	72%	67%	75%
This case is plagiarism	22%	25%	20%
Not sure about this case	4%	5%	4%
This is definitely not plagiarism	2%	2%	1%

II: *Judgement on plagiarism in "western" and "eastern" EU countries (Foltýnek & Rybička, 2013)*

	EU	EU E	EU W
This is serious plagiraism	23%	20%	24%
This case is plagiarism	41%	38%	43%
Not sure about this case	25%	31%	23%
This is definitely not plagiarism	11%	11%	10%

In part (d) when some words in the copied text had been changed, students mostly believed this was less serious plagiarism (see Tab. II).

Most of the positive answers (selecting serious plagiarism or plagiarism for this example) came from students who said they were confident about citation styles, study at institutions with policies and procedures dealing with plagiarism and already learned why and how to reference resources.

As these results were almost one year old and significantly more data was collected since then, we compared these results with the final data sets and found the results to be almost identical.

CONCLUSION

The research showed that there are vast differences among EU countries in many indicators. We can see that students are trained in some countries more than in another countries. Anti-plagiarism policies and procedures are common in some countries and rare in other ones. Also, the judgement of plagiarism upon specific case is different between countries. We also found that in many questions teachers have different views compared to students in the same country. Many of these differences flow from the culture and history of particular countries. This was confirmed by looking at responses from students in the former Soviet Union area.

Each of the IPPHEAE project reports for the 27 EU countries surveyed includes a comprehensive set of recommendations for improving policies for academic integrity in higher education. The project output include a substantial anonymised data set that will form the basis for further research. The consortium is trying to establish follow-on projects that will involve more HEIs within and beyond Europe to disseminate what we have discovered and begin to apply some of the results.

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