A study on ethical aspects and legal issues in e-learning

Stefanie Östlund, Andriy Panchenko, Thomas Engel

Abstract: *E-learning offers tremendous opportunities for a world-wide community to get access to first-class educational content. Though technology is advanced with respect to sophisticated e-learning platforms, many issues remain unsolved, e.g., students cheating in exams, lecturers using copyright-protected materials that should not be made publicly available, etc. In this paper, we analyse reasons why, and point out obstacles that hinder wide adoption of e-learning. To this end, the paper follows a two-fold approach. First, we critically evaluate related work. Second, we create and conduct a representative survey. Herewith we identify the main barriers on the way to a broad usage and acceptance of distance learning technologies.*

Keywords: *e-learning, ethics, legal issues in e-learning, cheating, technology readiness*

INTRODUCTION

During the last years the growing use of electronic devices in the learning world has evolved tremendously. The techniques around application development, podcasts, webcasts, open courseware and Massive Open Online Courses [9] have advanced but so far only few laws have been adapted and implemented. The standards related to security and privacy of e-learning platforms in the different European countries differ widely from each other and the need for international cooperation is bigger than ever because of requirements for harmonisation of certificates, anti-plagiarism, protection of personal data and privacy, etc. Our society is moving fast and the world of a student nowadays is not the same as it used to be. Everything is fast track and communication and its needs have changed. With this the ethical barriers have shifted towards using more and more electronic communication devices. In this regard, Brown [1] is talking about a "psychological distance" that implies that we do not get a direct feedback on inappropriate and unethical behaviour if we are not meeting face-to-face. There is even no possibility to read any facial expression, body language, or gestures while communicating with each other over a distance.

Interests of both, students and lecturers have to be combined and met in order to avoid the extent of the frauds happening nowadays that hinders wide adoption of the distance-learning technology. And these are not only the technical means that need to be strengthened and deployed: if the quality of teaching is good, cheating might become less since the student does not see the need to do so if well prepared.

Ethics and Laws in the todays academic e-learning world
Related works:
One of the major questions that remain open in many situations while using distance-teaching platforms is the regulation of responsibilities in the big field of electronic online learning.

In this context, Gearhard [2] says that legal issues in e-learning should be under the responsibility of the user. That means the provider of the e-learning platform takes no liability for any fraud happening. The author takes a face-to-face meeting and compares it to online interaction when studying ethics. Gearhard sees the biggest problem in the physical distance that is a trigger for frauds and ethically inappropriate behaviour. It causes a psychological distance that results in a high number of misuses in any direction. In a face-to-face meeting, it is visible directly what reaction the person in front of you has. If there is an inappropriateness of behaviour, it will be noticed directly. This is not the case when using distance-learning platforms where the student might be sitting in front of a device at the other end of the world. Our possibilities to get educated get much broader with the usage of new technologies, but also the world of fraud and misuse becomes much larger. The inhibition level is lower if people do not meet face-to-face.

In another publication on this subject, Gearhart [3] also states that it is the teaching institution's responsibility to inform the student about the academic honesty and collegial behaviour rules that have to be followed. She suggests to solve and manage the problem on the institutional side in two ways: one side, by setting a policy that provides a model for students to follow and, on the other side, by involving technology ethics issues in the curriculum. Gearhard [2] thinks it is important that students understand that criminal and unethical behaviour has an impact on their future. Evaluation of our actions and the resulting way of handling play a key role; we should not only look at the results such as final grades.

Lengel [11] raises the attention to the Code of Ethics developed by the Association for Computing Machinery (ACM), the world's largest educational and scientific computing society (http://www.acm.org/membership/acm-at-a-glance).

The list of moral non-negotiable rules is listed in this ethic code37 as follows:
- Contributing to society and human well-being.
- Avoiding harm to others.
- Being honest and trustworthy.
- Being fair and taking action not to discriminate.
- Honoring the property rights such as copyrights and patents.
- Giving proper credit for intellectual property.
- Respecting the privacy of others.
- Honoring confidentiality.

This list is meant as guidelines for teaching institutions to create their own set of internal rules for the students.

There are different approaches for finding ways to detect or avoid fraud and cheating, such as copy-pasting, in distance learning.

The approach of Hinman [7] is suggesting three directions. One of them, the "Do-it-yourself Searches" is about control of the teacher. He wants to track down each paper and written essay with an online search so that the students find out that there is no mean of cheating since they will always be caught. The next one is talking about eliminating all possibilities for students to cheat in any case. He calls it the "Better Teaching Approach". If the teaching and the instructions given are well and specific enough, Hinman thinks that it will be more work for the student to buy a paper and work back to the preceding steps than writing it himself from scratch. The last approach, the "Virtues Approach", starts at the very root and wants to "produce" students that do not want to cheat in the first place [8]. Hinman [7] is concentrating on personal character here. The students have to be convinced about wanting to be honest and wanting to take the responsibility for their education. This is usually practiced and applied in Universities with "honour codes", where faculty members do not supervise exams, but students are trusted to be honest. Also reporting of violating this code by other students falls under this code. This though does not work in open, very centralised Universities where there are people from outside going in and out on a daily basis. This is different once the distance between the teacher and the students' increases. The inhibition level is lower using the Internet than, e.g., asking a student for a paper.

Fass [4] is evaluating the college students of today's world of scandals and corruption, pointing out a big lack of public morality. His opinion is that all this influences the student's thoughts and reactions in their moral behaviour.

The biggest concern in distance learning is always the fear that the student doing the work is not identical with the one being enrolled in the class. Fass tries to identify the sources of the cheating process. Where does the need for cheating come from? He comes to the conclusion that cheating has become a more accepted way of coping with the stress at Universities and that it would be necessary to include the below statement of definition

---

37 See http://www.acm.org/about/code-of-ethics

into handbooks to be provided to the students, no matter if enrolled in a distance learning class or in a classical course with physical presence:

Ethics of examinations (1), use of sources on papers and projects (2), writing assistance and other tutoring (3), collecting and reporting data (4), use of academic resources (5), respecting the work of others (6), computer ethics (7), giving assistance to others (8), adherence to academic regulations (9).

It is though questionable if a student that would cheat is being stopped by these definitions. It is possible that it works with students that have an honest character anyways, but it will not decrease the number of frauds dramatically. The most important and, maybe, the only point that might help is giving more assistance and tutoring because a student that is well prepared should not see the same need for cheating as a student that is not prepared at all.

To find out how severe the situation in the real world is, the project FETCH decided to start a study on the issues of fraud in e-learning. Below we present the results of this study.

Our study:

In the framework of the European project FETCH (http://fetch.ecs.uni-ruse.bg/?cmd=gsIndex) it was decided to collect feedback and clarification about the open issues in the e-learning field.

We decided to make a project-internal study on this subject and received results from 30 different institutions from 25 European countries. The participants of this survey were selected out of the EU project FETCH consortium, which consists of 67 partners from 35 different EU countries. These are Universities, Institutes and companies that are involved in e-learning. We defined six questions related to user experiences in e-learning. In the following, we present the outcomes of our study.

1. Moral Challenges

The first question dealt with facing moral challenges[38] related to the engagement in the e-learning process.

Only six out of the thirty answers marked that they have any moral challenges in their e-learning process at their institutions. Referring to why this is so and what challenges have to be faced, the most common answers pointed out cheating and plagiarism. However, also impersonation, copyrights, providing uniquely identifiable information, data security and storing of personal data in the e-learning processes were mentioned as issues arising in the process.

Some survey participants mentioned the problem that often there is no evaluation of the learning process. As a consequence, several study participants assume that the quality of teaching has a direct impact on the quantity of cheating, i.e., the better the quality, the less cheating committed and vice-versa.

One of the partners participating in the survey had one case where the student self-reported a misconduct after it happened. He offered to make up for it by completing additional assignments in order that the misconduct would not be reported further. This is an example of - even though the cheating takes place – domination of the moral. As long as the moral barrier is in place, the e-learning process is still under a certain umbrella of control.

---

[38] Morals are what you, personally believe is right or wrong.
Banner of a for-profit e-learning organization:
Headline: "You may already have a degree and not know it."
Question here: "How much genuine learning takes place in the process of earning
a degree that you did not know you have?"

2. *Rights-based justice*

A second question addressed in our study was the "rights-based justice"39. It concerns the respect for people's rights, such as prohibition of discrimination, and whether it is always respected in the e-learning process.

Here the majority still was stating that in most cases these rights are being respected. Though we also received many concerns about this. Some claimed that these rights are only respected if it is possible to provide written evidence of discrimination (e.g., insults are mostly performed verbally). Some others had the opinion that in fact it is less a problem in distance learning, as in such environments it is easier to prohibit discrimination since people do not have to see each other. Others claimed that it depends on the topics and the contents transmitted.

There was though also a minority of people saying that the rights-based justice is not being respected. To their opinion these negative aspects could be explained by the different living standards and due to the fact that there are different rights to accessibility to e-learning. Others faced problems because the content often attempts to be same for different groups of users but often there are issues with colours, which could be a problem for colour-blind people. They stated that the size of font, picture, etc., could be a problem for those with a limited eye-sight.

The e-learning sector is evolving all the time while immensely growing. This has to be taken into consideration. It is something that should also be addressed in handbooks and internal institutional rules that are handed out to the students during their enrolment. One way to avoid discrimination of, e.g., blind people is to offer visual as well as audio course materials. This already exists in many platforms and is practiced, e.g., at Hasso Plattner Institute (http://hpi.de/studium/studium-digitale.html) and probably at some other institutions around the world.

3. *Quality of e-learning programmes*

The next question was about the quality of e-learning programmes in the Computer Science and Engineering field that people had worked in so far. Here it is very surprising that for the time being no one has worked with excellent e-learning tools. Most of the survey participant had found the e-learning tools they had worked with rather poor and rated them with scores between 3 and 8 (out of 10). In a rating of one to ten, ten being the worst, zero of the participants though rated the tools with a score of one. One person gave the tools a nine, and still four participant a score of eight. Five people rated them as seven, two gave a six and three marked an average grade of five. Still, four people have voted a score of four, nine a ranking of three and finally two ended up marking a two.

These result are alarming and leave a lot of room for improvements in e-learning programmes as the majority of survey participants consider them to be of a poor quality. However, taking into account the fast evolving world of mobile learning software, there is a hope that a lot will be moved into a right directing in the upcoming years.

4. *Academic frauds*

We asked people about the academic frauds they have experienced during their careers. There was a close run between the ones that have experienced frauds and the ones that have not so far. We did not take into consideration the seniority of survey participants in this case which should possibly be done in order to take a more deeper look

---

39 Rights-based justice – respect for people's rights, such as prohibition of discrimination.

Rights-based approaches (RBAs) are being promoted as a means to ensure that conservation policy and practice support communities' rights to self-determination and well-being and promote social, cultural, and environmental justice. RBAs are "integrating rights norms, standards, and principles into policy, planning, implementation, and outcomes assessment to help ensure that conservation practice respects rights in all cases, and supports their further realization where possible." They are based on the principle that communities are not merely stakeholders whose views governmental and conservation agencies may take into account, but are rights-holders to whom implementing agencies have statutory obligations. In addition, every right is accompanied by responsibilities and duties to the self and to other individuals and collectives. (source: Natural Justice_ http://naturaljustice.org/context/rights-based-approaches)

into the insights of this subject. Fourteen participants have experienced misuses while sixteen have not yet done so.

Asking for the kind of frauds detected, we received answers such as:

- Students trying to get the results from the last semester and hand them in this semester.
- Lectures are presented by lecturers without owning copyrights on the materials.
- In our distance learning courses all exams are face-to-face, which significantly reduces the possibility for cheating and makes it more or less the same as for regular students.
- Deception.
- Plagiarism.
- Cheating.
- Students presenting another student's discussion comments as their own in another discussion thread. Fortunately, a third student found it and reported the fraud.
- Yes, students sometimes plagiarize their assignments. Students sometimes cheat when they are in time constraints.
- Students misuse login information to obtain assignment solutions of other students (impersonation).
- Students copy materials out of the e-learning and e-assessment system and share them with other students.
- Paid services – some students pay the others to help them to prepare on assignments.
- Some students submit almost equal homework during the e-learning process in the e-learning environment.
- Other people doing the coursework. Someone else sitting at an online exam when performed over the Internet rather than coming to the University and proving who they are.

We found out that not only students are committing frauds, but also teachers are doing so by not respecting copyright rules.

Copyright laws exist in most countries but are vague when it comes to online material and software. Most of the Universities and institutions have regulations about who owns the results of what has been done within the institution. So intellectual property rights are covered. When it comes to copyrights on course materials, though, there is a lack of regulations in this issue [5].

Seeing the big number of people already having experienced fraud, it seems that the morality level for cheating is not set very high and increases with the distance put between the teacher and the student [1].

5. Materials provided

The results of our study also show that the majority of the institutes have no material or handbooks on fraud and misuse at their institutions.

6. Quality assurance

Another outcome of the study is that there is almost no quality assurance process. For most of the institutions it does not exist at all, which is alarming looking at the growing e-learning world.

CONCLUSIONS AND FUTURE WORK

There is big potential for improving quality (ethical aspects and legal issues) in distance learning. The institutions have to adapt faster to the growing environment in this area.

The use of online tools is expanding constantly around the world and as the distances become smaller thanks to improved mobility, the problems around legal issues and also ethics and the different standards of morality in different regions of the globe become more and more relevant. Corresponding steps have to be taken by the institutions and the governments in the different countries. New approaches to use policy enforcement systems (e.g., [10]) and "accountability for distributed systems" [6] applied to e-learning scenarios will further improve tools and help to tailor and adapt procedures to the new circumstances.

More questions have to be asked and answered to understand the real needs of the users and to identify obstacles on the way to a wide adaption of distance-learning techniques. There are trends in Europe indicating that some countries are more advanced than the others. There is a tendency to be seen that the "old EU" countries are more advanced in this regard, but there are also very rich and wealthy countries where the trends in e-learning are not advancing as fast as they should. A lot has to be done here. Because IT technology for e-learning platforms changes rapidly there is a constant need for adaption of rules, laws and processes.

REFERENCES

[1] T. Brown, „Ethics in e-Learning", in iBiZ2008 Workshop for Net Business Ethics, Feb. 10-11, 2008.

[2] D. Gearhart, "Ethics in distance education: developing ethical policies", in
Online Journal of Distance Learning Administration, 4 (1). Retrieved on July 9th 2015 from
http://www.westga.edu/~distance/ojdla/spring41/gearhart41.html, 2001.

[3] D. Gearhart, "Preparing students for ethical use of technology: a case study for distance education", in Ethical practices and implications in distance learning, U. Demiray, & R. C. Sharma, Eds., Hershey, PA: Information Science Reference, pp. 80-92, 2009.

[4] R.A. Fass, "Cheating and plagiarism" in Ethics and Higher Education, May, W. W. Ed. NewYork: Macmillan Publishing Company and American Council on Education, pp. 170-184, 1990.

[5] Gorman, Robert A., "Intellectual Property: The Rights of Faculty as Creators and Users" Academe, vol. 84, no. 3, pp. 14-18, May-June 1998.

[6] A. Haeberlen, P. Kuznetsov, and P. Druschel, "PeerReview: Practical Accountability for Distributed Systems", in Proceedings of the 21st ACM Symposium on Operating Systems Principles (SOSP '07), Stevenson, WA, October 2007.

[7] L. M. Hinman, "Academic integrity and the World Wide Web", in Computers and Scociety, pp. 33-42, March 2002.

[8] P. Isa, M & S. Siti Akmar Abu and K. Jusoff "Inculcating Values and Ethics in Higher Education e-Learning Drive: UiTM i-Learn User Policy", in International Journal of Human and Social Sciences, vol. 2 (2),   pp. 113-117, 2008. Available: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.307.958&rep=rep1&type=pdf

[9] C. Meinel, C. Willems, "openHPI: the MOOC offer at Hasso Plattner Institute", Universitätsverlag Potsdam, ISSN (online) 2191-1665, 2013. Available: http://pub.ub.uni-potsdam.de/volltexte/2013/6717/

[10] S.K. Nair, A.S. Tanenbaum, G. Gheorghe, B. Crispo, „Enforcing DRM policies across applications",   in Proceedings of the 8th ACM workshop on Digital rights management, pp. 87-94, 2008.

[11] C. Thurlow, L. Lengel,, A. Tomic, "Computer mediated communication: social interaction and the Internet", London: Sage Publications, pp. 86-87, 2004.

ABOUT THE AUTHORS

Stefanie Östlund, Dipl. Rechtswirt, Phone: +352 466644 - 5615,

Andriy Panchenko, Dr.-Ing., Phone: - 5830

Thomas Engel, Prof. Dr., Phone: - 5486

All authors are employees of the SECAN-Lab. The SECAN-Lab is a research group hosted by the Interdisciplinary Centre for Security Reliability and Trust (SnT) with members from the Computer Science and Communications Research Unit (CSC) at the University of Luxembourg. Research interests of the SECAN-Lab group, headed by Prof. Thomas Engel, focuses on interoperability and security aspects of spontaneously-created and self-organized non-centralized networks. The authors are reachable under the following E-mail addresses: <firstname.lastname>@uni.lu

The paper has been reviewed.