Quality of students' work in the field of general pedagogy

Marjan Krašna

University of Maribor, Faculty of Arts, Faculty of Education

Koroška cesta 160, 2000 Maribor

`marjan.krasna@um.si`

Abstract. *University study is not just the acquisition of the knowledge. Quality of study are best expressed in students' acquired competences. In the last few years' students grade lecturers and courses for improving the quality of TLS (teaching-studying-learning) processes. Students have become accustomed to their rights (and they exercise them in all occasions) but in general they forget or does not understand their obligations in the TLS processes. We have studied the understanding of the concept of quality in the students' work in their project assignments. Project based learning (PBL) is a didactical strategy where students gain or improve several competences from the key EU competence framework and prepares them to the real working environment. To acquire necessary data, we use students' deliverables and analyze the content of the deliverables from various aspects. The research shows that students in general do not understand the concept of quality (of study processes and in their deliverables). We have seen that systematical work is needed to educate them to internalize the concept of quality.*

Keywords. study, quality, competences, project based learning.

1 Introduction

Even before the Bologna reforms transforms our universities we assure the high quality of study programs. Most of the time the quality issues were hidden from students but in the recent years the concept of quality becomes paramount in all university's aspects. Students were asked to participate in the study processes and influence to the high quality of study. The students' grades of lecturers and study courses lead to the new reality which becomes public in study year 2009/2010. University of Maribor publish all grades the students have provided about different aspects of study. Students are required to grade all their courses and lecturers before they can enroll to the next study year. The acquired data are now in the range between -2 and 2 for lecturers and courses *(-2 means very bed lecturer or course, -1 means bed lecturer or course, 0 means average lecturer or course, 1 good lecturer or course; and 2 excellent lecturer or course).* Additionally, the data about courses also contains the aspects of lectures, seminar/laboratory work, and individual work where students provide the assessment of required students work in the custom grade scale: "too little", "adequate", or "too much".

Much heated debates are still about the proper methodology of the students' assessment. Most objections of the students' assessments of the lectures and courses are which students are eligible to participate in the assessment process. Students can assess only courses for their study programs in the current study year but they can assess them even if they were not present on courses' activities (lectures, laboratory work, or seminars). Many lecturers object the public display of students' grades. They advocate the precondition that only students who participate in 85% on study activity should be eligible to participate in the assessment. Arguments are also that student generally do not give good grades if they are satisfied with the courses and teachers (they can select the option I would not grade this course) but they often give negative grades if they fail the exams. Since the students' assessments are anonymous these allegations cannot be proved nor dismissed.

The assessment of the courses and lecturers are the students' rights. On the other hand, students also have obligations. They should give their best to complete the study, search for the new knowledge, discuss and question contemporary truths, acquire critical opinion, learn to respect the evidence, and internalize the concept of quality. We believe that even larger lists of students' obligations could be found but for the purpose of this article these should be enough.

The students of the elective course of *Didactics strategies information support* were participants in our study. These are students on the 2nd year of postgraduate study. The contents of the course are:

- Didactical strategies for different education levels.
- Didactical strategies influence to the educational concepts.
- ICT support for didactical strategies.
- Test cases of ICT support for didactical strategies (research teaching, project teaching, team teaching ...)

We started gathering the data from the students in 2012 when the course started for the first time.

The course of *Didactics strategies information support* give emphasizes on different types of narratives. The good structured story from the start to the end is back-bone of every enterprise. Even if the outcome is the education, construction, research, or development; the narrative encapsulates them all. We also agree that the important part of the course is also the teamwork therefore students' grades depends not only on their individual work but also the teamwork. A Project-based learning (PBL) (John W., 2000) was therefore applied as suitable for our needs.

Though we have studied the algorithm for selection of members for students project teams (Kermek, 2002) we have decided to let students to form their own teams around "natural leaders". Because of the nature of our two major study programs there are almost impossible to schedule all students' activities. Students who are similarly scheduled generally formed one team. In our case the students formed the team on the first laboratory work where we explained the role of the team members and team leader, their requirements, course outcomes, and influence on course grades. Student who was in the position of the team leader become aware that he/she was responsible for the outcome, presentation of the team work, and his/her report was a part of the grade of the other team's members. All students were aware that the team leader graded them in his/her report in the grades they get were 10% of their course grade. When all facts were discussed and all responsibilities were cleared students were given the access to the LMS Moodle where they formed the teams. The first assignments that should produce the results in fortnight was given to the teams. After the teams managed to finish their first assignments they were given a choice to restructure, if majority of the team members opted for the change. After that the teams stayed firm till the end of the course.

During the course we wanted to cover different students' competences from the EU key competences framework (European Union, 2006). To promote competences, we designed the education and shown the benefits of the team-work (de los Rios-Carmenado, Rodriguez Lopez, & Perez Garcia, 2015). We also prepared assignments that suits our needs to fulfil the course objectives according to the contemporary findings (Hartescu, 2014) (Balkevicius, Mazeikiene, & Svediene, 2012) (Fernandez-Plazaola, Pons, Llinares, Montanana, & Navarro-Astor, 2012). Since we know our students, we wanted to give them the best choice to express their creativity (Daud, Omar, Turiman, & Osman, 2012) and team-teaching using ICT (Chang & Lee, 2010). In the scope of the goals of the course we applied different learning tactics: peer learning (Boud, Cohen, & Sampson, 2001), problem-based learning (Hmelo-Silver, 2004), media assisted learning (Gerlič & Jaušovec, 1999), creativity in education (Jaušovec & Jaušovec, 2011) and learner-centered education (Aslan & Reigeluth, 2015).

2   The course for data acquisition

Course *Didactics strategies information support* started in 2012, was continuously elected by enough students, and was good graded by students. Course worth 6 ECTS and consist of 30 hr lectures, 30 hr laboratory work, and 120 hr individual work. It is mainly selected from students of Pedagogy but other students could also elect it as the intra-faculty elective courses.

Table 1. Number of students attending curse by years

Year	# of students
2012	15
2013	23
2014	22
2015	28

We have engineered the course (lectures / seminar / individual work) to address most of the key competences from EU framework (European Union, 2006). Students' own preferences influenced the level of the acquired competences but they all have the same chances and it was up to them to exploit them.

Students were also to prepare final report for the course where all topics of their involvement during the course were addressed, discussed and analyzed. Completeness of students' reports shown the students' understanding of the **quality**. All students knew what the report need to have to be considered good report, great report, or just a text; we discuss that in the introduction to the course. But to encourage their creativity we did not provide the blueprint for the reports. Our opinion is that the forms can limit the creativity and unify thinking. This is already shown in the second degree master theses where the structure of the theses become completely rigid.

3   Data acquisition and results

We have gathered the data from the year 2012 (study year 2012/2013) until the year 2014 (study year 2014/2015).

Students' report and digital products were used to assess measured parameters. The results were gathered exclusively in form of written text. Therefore, we have use suitable statistical methods for text analysis (Bratina & Čagran, 2010). We assessed (1) individual work, (2) schedule, (3) student's impression, and (4) the grades of the course provided by students. The data acquired for each year is too small to perform any complex statistical analysis and that are the reasons that we present the data in the descriptive statistics only.

In the following sections we are going to explain how we have grade the data for the analysis and the results we get from the students' reports.

3.1   Students' reports' completeness

We have decided to grade the reports in three level scale (table 2).

Table 2. The grading system for completeness of students' reports

Grade	meaning
0	Incomplete report
1	All major parts are present in report
2	Complete report

The grades meaning is pretty strait forward:

0: Incomplete reports are those reports where some parts are missing. What should be in the report was discussed in the beginning of the course but in some occasions students decided to omit some topics. When students submit reports there are not eligible to correct them anymore.

1: All major parts are present in the report means that report is in general considered as complete but they lack some topics that could be considered less relevant.

2: Complete report means the report which is considered as proper report needed for the project work. It does have all required topics nothing is omitted and it is also contextually sound.

3.1.1   Results: Students' reports' completeness

The data from the table 3 show that students are generally unable to provide complete reports which are graded with the grade 2. This can be the problem of understanding of the minimal standards. Achieving the minimal standards means only positive grades. The year 2013 was a year where students' reports achieved the best scores. The students were well organized around some natural team leaders who provided the examples how others should prepare report for them. Therefore, they just continue in this fashion and prepared their individual reports the same. Despite the good results all reports look the same, lacking any creativity that naturally occurred between teams' outcomes.

Table 3. The students' report completeness.

	grade			
year	0	1	2	Total
2012	3	8	3	14
2013	-	4	18	22
2014	5	5	7	17
Total	8	17	28	53

3.2   Timetable, schedule and team work

A part of students' report was the timetable for their entire work activities during the course. This activity is important for multiple reasons:

- Student would be aware how much effort they put into the course and they would know how to calculate the costs of salaries.
- Students would learn how to prepare reports when working in the team and in the project environment.
- Students would become aware of importance of time keeping and its effect on quality.

The team leader has to prepare the report for the project based on the individual students' reports. The time in hours is the measure for the students' effort and show the individual efforts inside the whole team effort. The team leaders could use this measure to grade their colleagues.

Students teams negotiate the way to record the timetable and consequently the students' effort.

Table 4. The grading system for the students' analysis

grade	description
0	student provide the dates and the short description of the tasks accomplished
1	student provide the dates with hours and short description of the tasks accomplished
2	student provide the separate complete reports for course and project, dates, hours and descriptions

3.2.1   Results: Timetable, schedule and team work

Based on this grading system we managed to get the results shown in table 5.

Table 5. The grades of students' timetable reports

	grades			
year	0	1	2	Total
2012	13	1		14
2013		11	11	22
2014	1	8	8	17
Total	14	20	19	53

The data from the table 5 shows that despite there are some advancement in the students' report on the topic of timetable they are still unable to prepare the good report needed for work on the EU projects (analysis of the reports needed for the EU project was part of the course lecture, old reports from actual projects were studied and analyzed).

3.3   Students' didactical feedback

The "didactical mirror" is the term when students give the complete analysis of the course based on his previous experiences; course activities; and its suggestions how to improve the course. Though we would like to get those reports we did not get them but we received student's impression which is a subset of the didactical mirror.

The required part of students' reports for the course are also students' impressions that we used to improve the TLS processes and make it more suitable to the next students' generation. The students were aware that the impression does not affect their grades and they should be honest without any penalties even if they provide negative critics. We wanted to get the quality feedback and not gold-plated useless text. The grades of the students' impressions were not available to the students but were only used for the purpose of this research. The grading scale is presented in table 6.

Table 6. The grading system for the students' analysis

grade	description
0	No analysis (missing analysis)
1	Superficial text just because its needed
2	Constructive criticism of the course topics and the proposed changes for the future

3.3.1   Results: Students' didactical feedback

Based on the grading system from the table 6 we gathered the results presented in the table 7.

Table 7. Students' grade on feedback

	grades			
year	0	1	2	Total
2012	4	7	3	14
2013	2	1	19	22
2014	5	3	9	17
Total	11	11	31	53

From the table 6 we see that in the beginning we did not receive many of constructive criticism from students (grade 2). In the year 2013 students provide many constructive criticism reports and we use their feedback for the year 2014. In the year 2014 student again provide less constructive criticism reports than the previous year. Because the ICT is subjected to the constant change, and it is a part of our daily life, we expect that the students' feedbacks are going to correlate with the grades the students give to the course. And indeed, when the students

provide more constructive criticism reports, a year later the grade of the course improves (see table 8; the grades of courses are discussed in the Introduction).

Table 8. The students' grades of the course

year	2013/2014		2014/2015	
	Grade	Std. dev.	Grade	Std. dev.
Group 1	1.11	1.28	1.60	0.56
Group 2	1.41	0.64	1.92	0.28

4   Conclusion

The quality of education will play a major role in the future and will be assessed through the competences of the graduates. The concept of the competences was successfully proven before (Repnik & Grubelnik, 2011) and verified again. Observation of students of general pedagogy in their last year of study (master degree, 2nd year) and acquired data gives us valuable feedback to the students' qualification.

In the course of *Didactics strategies information support* students have different assignments that addressed different aspects of their future work. From the individual work to the team work they managed to acquire and improve their competences and hopefully understand the concept of quality.

The teamwork proved to be the good for some and the bad for the others. In general, the students' preferences are almost exclusively in the individual work. We have mixed opinion about this finding. They will probably be working in the team environment and team skills are needed for their success. It was proven before that the interdisciplinary teams provide much better results even without extensive supervision (Wirth & Repnik, 2015) but we are reluctant to agree with this findings if our graduates are "hard" individuals.

The results from the students' reports prove that the students are the campaign learners and the campaign workers. This can be easily discovered from their inability to provide the good schedule of their activities. The failure to provide complete students' reports also show they do not fully understand the concept of quality. We are going to need additional effort in the future to address these issues.

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