Students' and Teachers' Views on Fair Grades - Is it Possible to Reach a Shared Understanding?

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I. Introduction

Our aim is to relate our own findings on students' expectations on their grades and the consequences for self and peer assessment with observations done in previous studies. This is done by both referring to studies made in Sweden where the context is relevant to our own, but also to an ongoing international discussion on grades and assessment.

We give a project course in Software Engineering at Chalmers University of Technology and the University of Gothenburg where the students work in teams half-time over eight weeks. The traditional setup at our department is to give a written exam in the last week of the course to give individual grades or to give all team members the same grade based on the team effort. This seems to be a common way of handling team projects; Berg and Borges [1] report that the assessment criteria for team projects at the Faculty of Engineering LTH at Lund University are aimed at the team level and not at the individual level. They also note that the team project is used as a complementary form of assessment to the traditional exam. Our ambition is to use the team project as the basis for assessment in our project course. The challenge is then to find the free-riders and top students in the teams while not spending more time on assessment than budgeted [9].

Both approaches in the traditional setup of assessing individuals in team projects have their limitations; a final written exam will not necessarily identify those who have contributed to the team effort and it is time consuming to align the exam with the project. A third possibility would be to involve the students in the assessment.

II. Challenge

The students have the necessary information about the contribution of each student within the team. To assess the individual contribution is however not just a matter of counting hours. It also requires an ability to judge how the contribution met the requirements and learning goals of the project besides evaluating how each contribution helped to finalise the project within the time frame. Since the students are the ones with experience of how the team members have carried out their task, their involvement in the assessment process could play an important role in grading but also in their own learning [2], [3]. But do students have a realistic understanding of what grade they should be given? If students are to be involved in the assessment process, students and teachers need to reach a shared understanding of what a fair grade is.

Both Wiiand [2] and Biggs [4] stress that it is necessary that students know exactly what is demanded of them when a new course begins. This is where it gets problematic. Close [5] argues that a fair grade should show how a student fulfills the course objectives, given an impartial and consistent process carried out by an expert within the topic of the course. When it comes to evaluating individual contributions within a team the students are the experts. But Yost [6] and Daniels et. al. [7] argue that the objectives of a course can be interpreted differently by different experts while Rust [8] claims that grading is subjective, at least to some extent. Is it then realistic to expect the students to be able to relate their own and their peers' effort to the course objectives in a fair way?

As part of a larger study in 2010, we [9] asked our 108 students to anonymously (in writing) answer two questions after they had been given their course grade: *What grade did you expect?* and *What grade were you given?* The aim was to see if there was a difference between the students' assessment of themselves and our assessment. 57 students answered both questions and the results is shown in Table I: Expected vs. given grades.

29 out of 57 students answered that they got a lower grade than they expected. That is one out of two students who answered the questionnaire. Only 6 students underestimated their grade. Not one of the students that answered both questions expected to be failed (U). Overall the students overestimate themselves compared to the assessment carried out by the teachers. This result is echoed by Leire [10]. For comparison, the grades were distributed so that eleven students out of 108 (10%) received a 5, 20 students (19%) receieved a 4, 55 students (51%) received a 3 and 22 students (20%) were failed.

A problem with self- and peer assessment is that they are not anonymous. Wiiand [2] argues that peer assessment is difficult to implement after the students get to know each other. It also seems that students have other expectations on their own work compared to the work of others [10]. The

Grade		Replies
Expected	Given	
5	4	4
5	3	4
4	3	19
3	U	2
3	3	11
4	4	6
5	5	5
4	5	3
3	5	1
3	4	2
Total		57

Table I
EXPECTED VS. GIVEN GRADES

most common complaint we get when using peer assessment is that it is difficult to assess someone you know. Peer- and self assessment can be successful when there are clear criteria for how the assessment should be carried out and when the solution to the task has a given structure [12]. But if experts disagree on how to interpret course objectives it is difficult to expect students to assess themselves or others based on how they meet the objectives.

III. DISCUSSION

The difference between what teachers and students see as fair grades exposes two challenges. First, it seems a difficult task for all students and teachers to reach a common understanding of the assessment criteria and process when teachers themselves can have divergent interpretations of the course objectives. Secondly, what is fair to expect of the students, given their pre-knowledge and the objectives of the course?The quality of an analysis will hopefully vary between first- and third year students and even if we expect more of a third year student it still does not say how much more we can expect for a certain grade.It is difficult to unambiguously quantify how much a student should have *understood* or *know* for their grade.

We have found that students who argue for a higher grade often refer to how many hours they have spent on the course or team work; they very seldom refer to the quality of their effort. This is also reported by Berg and Borges [1].

A third challenge has just emerged as some students now are required to pay tuition fees for their education. Yost [11] reports that students in the U.S. are now even more concerned about getting higher grades as the fees for their education rise. Meeting the expectations of the students is one of the reasons for the ongoing grade inflation. Just as we risk to deflate the value of a grade through grade inflation, the same is true if we expect too little of our students since we deflate the content of the course [11].

REFERENCES

[1] E. Berg and K. E. Borges, "Examination av enskilda studenters insatser i grupparbeten," in *4:e pedagogiska inspirationskonferensen*. Lund, Sweden: LTH - Genombrottet, 2006, pp. 53 – 55.

[2] T. Wiiand, "Examinationen i fokus - högskolestudenters lärande och examination, en litteraturöversikt," in *Rapportserie från Enheten för utveckling och utvärdering*. Uppsala Universitet, 1998, vol. 14.

[3] H. Hult, *Examination inom ingenjrs- och civilingenjrsutbildningarna*. Linkpings Tekniska Hgskola: NyIng, 1998, vol. 2.

[4] J. Biggs, *Teaching for Quality Learning at University*. Society for Research Into Highter Education & Open University Press, 1999.

[5] D. Close, "Fair grades," *Teaching Philosophy*, vol. 32, no. 4, pp. 361–398, 2009.

[6] B. O'Donovan, M. Price, and C. Rust, "Know what I mean? Enhancing student understanding of assessment standards and criteria," *Teaching in Higher Education*, vol. 9, no. 3, pp. 325–335, July 2004.

[7] M. Daniels, A. Berglund, A. Pears, and S. Fincher, "Five myths of assessment," in *6th Australasian Computing Education conference, ACE2004*, Dunedin, New Zealand, 2004.

[8] C. Rust, "Purposes and principles of assessment," *Development*, 2002.

[9] H. Burden, R. Heldal, and T. Adawi, "Assessing individuals in team projects: A case study from computer science," in *Konferens om Undervisning och Lärande, KUL*, Gothenburg, January 2011.

[10] E. Leire, "Leder självvärdering, kamratexamination och förbättrad kommunikation till rättvisare uppsatsbetyg och nöjdare studenter?" in *Den 2:a Utvecklingskonferensen för Sveriges ingenjörsutbildningar*, Lund, December 2009.

[11] B. Yost, "Who owns the grade?" *Faculty Matters, University of Phoenix*, Spring, 2011.

[12] A. Axelsson, "Kan man lita på kamratgranskning?" in *3:e Pedagogiska inspirationskonferensen, LTH*, Lund, Sweden, 2005.