Extreme alignment

understanding the costs and risks of the assessment regime and identifying potential solutions

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Extreme alignment

Understanding the costs and risks of the assessment regime and identifying potential solutions

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Summary. This project reports presents my pedagogical research associated with the University of Copenhagen 'Teaching and Learning in Higher Education Programme' (Universitetspædagogikum). It draws from my experience as Course Responsible of the MSc course 'Research Planning' during the period end-August 2015 – end-October 2015. The report will present a case of what I claim to be 'extreme alignment'. It begins by explaining the notion of alignment in teaching, including the role of assessment, and continues with an introduction to the course itself including its assessment regime. It then presents the costs and risks associated with such alignment, based upon my own experiences and drawing from input from the students. The report closes with suggestions on how to simplify the course structure while continuing to endeavor toward alignment.

Introduction to alignment

'Constructive alignment' is a notion entailing particular beliefs about how learning occurs and what the teachers' role is in learning processes. Namely, new knowledge is 'constructed' by students as they draw from their own experiences and capabilities, while teachers 'construct' learning environments that provide activities appropriate to achieving the desired learning outcomes (Biggs and Tang, 2012). In other words, teachers construct the alignment; students construct the meaning.

For instructors, constructive alignment thus encourages a "system" approach aiming to optimize conditions for quality learning and moreover, for achieving desired outcomes (Biggs and Tang, 2012, p. 1). As an approach,

constructive alignment is "a powerful conceptual tool" aiming to enable teachers to evaluate "the consistency between learning objectives, learning tasks and assessment" (McLoughlin, 2001, p. 25). Biggs, 2003 points out, "The key is that all components in the teaching system - the curriculum and its intended outcomes, the teaching methods used, the assessment tasks - are aligned to each other. All are tuned to learning activities addressed in the desired learning outcomes." Clearly, alignment is an arduous ambition. Strategies toward an aligned course can thus range from insufficient to extreme.

Assessment and alignment

A challenge for teachers is to determine which of a course's tasks and activities should be subject to assessment. Assessment in large part defines what students see as important and what they spend their time on (Brown, Bull, and Pendlebury, 2013). While teaching methods should ensure that students learn what we want them to learn, "assessments should reveal how well students have learned it" (Carnegie Mellon, n.d.). For this to occur, learning objectives, instructional strategies and assessments demand alignment so as to reinforce one another. Further, if in alignment with the other components, assessments may serve not only to demonstrate learning but can potentially induce more and greater learning. This invokes questions and assumptions around student motivation, such as whether marking produces participation and moreover, around the quality of that participation. While motivation is a critical component in education, this report will bypass this concept and stay focused on alignment through assessment, with the assumption that marking has a tendency to increase student participation in a context where they would otherwise engage less. Perhaps, the ideal learning environment may be one in which assessment is obsolete (though such an ideal will typically be constrained by countless exogenous factors).

Thus what, when and how to assess is a major challenge including within an 'aligned' course. A key question then for assessment is, what kinds of tasks will reveal whether students have achieved the learning objectives (while contribute to learning)? Biggs, 2003 notes, "faulty assumptions about and practices of assessment do more damage by misaligning teaching than any other single factor." Further, "if assessments are misaligned with learning objectives or instructional strategies, it can undermine both student motivation and learning" (Carnegie Mellon, n.d.).

Introduction to Research Planning MSc. course

The MSc Research Planning (RP) course is a 7.5 ECT course offered in Block 1 under the administration of the Study Board of Natural Resources and Environment. The description is available online[1]. Broadly, RP intends to "provide tools for, and experience with, systematic design of research projects." While most research examples in the course are situated within natural and social science aspects of natural resources management, the principles are intended to "apply generally". An additional aim is the "inculcation of the values of scholarship: inquiry, reflection, integrity, open mindedness, evidence-based thinking, and collegiality."

The more specific **intended learning outcomes** of the course are explained according to 'Knowledge, Skills and Competences'. Specifically, the student should be able to:

Knowledge:

- Reflect on the quality of research design.
- Argue cogently and think critically within the parameters of a particular academic discipline.

Skills:

- Apply principles for good research design, including critical discussion of literature and problem identification, development of hypotheses and research questions, determination of data requirements, and selection of appropriate methods.
- Reflect on risks and ethical issues in relation to project implementation.

Competencies:

- Demonstrate independent learning skills necessary for the foundation of lifelong learning.
- Tackle scientific problems by collecting, analysing and evaluating appropriate qualitative and quantitative information and using it creatively.
- Display the competencies, key skills, behaviour and attitudes in relation to individual and group work required in a professional working life.

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[1] http://kurser.ku.dk/course/lfkk10270u/

The teaching and learning **methods** consist of: *"Blended learning combining e-learning and classroom activities. E-learning is centered around internet-based teaching modules integrating literature studies and exercises, including computer mediated conferencing designed to allow students to interact to construct new knowledge. Classroom sessions will: (i) introduce systematic research proposal writing through presentations and theoretical exercises, and (ii) provide space for critical discussion of student presentations and development of constructive comments."* Specific activities entail extensive individual and group work.

Assessment in the RP course is arguably extensive (or, extreme). Below is an image taken from the course information document, which students receive in Week 1:

ASSESSMENT

35

50

15

■ **Synopsis**
Your individual research design that is assessed according to standard academic criteria; 50%

■ **Student peer review**
3 written student peer reviews provided after each of 3 group sessions; reviews must be constructive, critical, caring; 15%

■ **On-line activities**
Your performance in online activities: quizzes (5%); e-tivities (7.5%); reflection (7.5%); online course assignment; 15%;
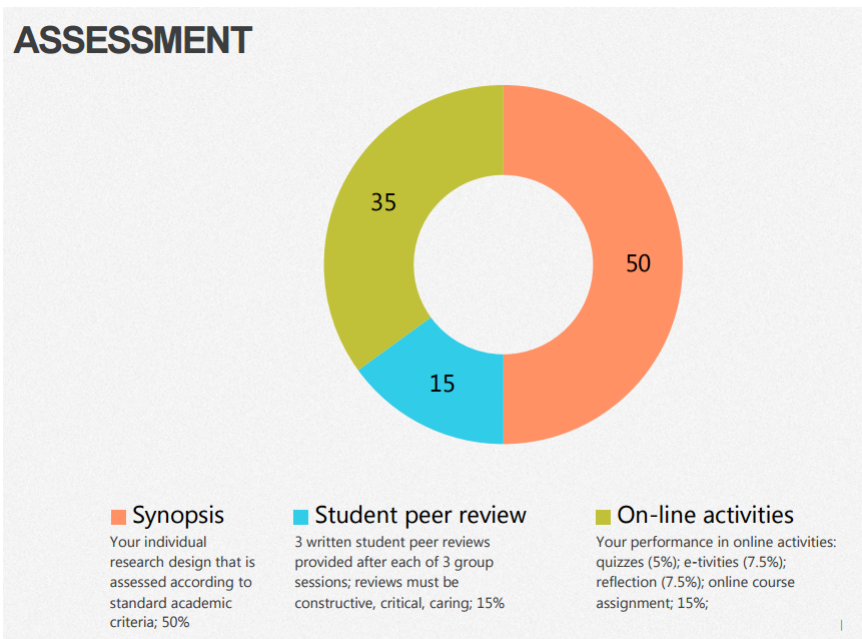
Fig. 20.1

The image above shows that students are assessed according to six different activities, namely 1) their own synopsis, 2) peer review reports, 3)

online quizzes, 4) online 'e-tivities', 5) online 'reflections', and 6) an on-line group assignment.

Their **own synopsis** is a final written product of maximum 10 pages excluding annexes. The **peer review reports** are approximately 1-4 page, produced thrice (peer reviews occur three times throughout the course) by one student for another, providing a synthesis of all oral comments that the other student receives. The **online quizzes** follow the various online video lectures and readings. The **online e-tivities** occur during the first month and are facilitated by a KU librarian. The **online reflections** are required at the end of each week through the entire course. The **online group assignment** is a project developed throughout the course and presented toward the end of the second month.

Most of the activities listed above contain multiple points of assessment. To be precise: 1) their own synopsis– **1**, 2) peer review reports – **3**, 3) online quizzes – **5**, 4) online 'e-tivities' – **5**, 5) online 'reflections' – **7**, and 6) an online group assignment – **1**. In other words, each student is assessed exactly **22** times in the course.

While the course can be evaluated in multiple ways in relation to align-ment (e.g. between intended learning outcomes and teaching methods), this report specifically examines the assessment regime. Thus the significance of the assessment regime i) in practice and ii) in relation to the intended learning outcomes, is the focus of the following section.

Understanding the costs and risks

What is the significance of such an assessment regime? To respond to this, I draw from my own recent experience as Course Responsible. Namely, such an exhaustive assessment regime as undertaken in the RP course im-plies significant time from the teacher – the primary impetus for the label, 'extreme'. In the RP course, the single Course Responsible completes all assessments. This raises several questions. First, whether this time is well-spent. For instance, while class is held twice per week, the teacher uses significant 'free time' to keep abreast of the marking. Such free time could be used for private interactions with students – which students in this course indicate is a preferred and beneficial activity.

Further, every mark demands a level of precision that requires rigid at-tention by the teacher, which entails additional stress – a very real problem

for many lecturers. Another obvious risk is the increased burden in responding to potential complaints from students. Indeed, every mark should be justifiable. Any and every moment of assessment can be challenged by any student, so the potential for challenges to marks is greater.

So many incidences of formal assessment may also risk the accountability of the teacher. In other words, the greater stress teachers face on a day to day basis could risk a greater number of opportunities for poor assessment. This has obvious implications too from the perspective of the students, who deserve and expect quality assessment conditions.

Student reactions

On the final day of the course or immediately after (for those unable to be present), all students (12 total) received a 13-question survey inquiring on aspects of the course assessment regime[2]. Six students responded. A summary of the results follows.

The first two questions queried the students' knowledge of the assessment regime, asking: 1) How many types of activities were assessed in this course, and 2) How many individual marks do you think your final mark is composed of? The results were that *no student* had accurate knowledge of either aspect of the assessment regime. This leads me to wonder, is it not problematic that none of them have managed to grasp what is arguably one of the most important practical aspects of the course? In other words, I interpret these results as evidence to support my belief that the assessment regime is too complex.

The following four questions inquired about feelings of having benefited from four of the six activities (reflections, e-tivities, report writing following peer review sessions, and online quizzes), selected by me as the marked activities likely to be most superfluous of the six. The value of this line of questioning will emerge in the next section, which presents suggestions for assessment regime revision. The least useful were equally found to be the reflections and e-tivities. In an extension of an examination of the value of the various course elements, questions 11 and 12 requested students to score all six marked elements in relation to how they i) supported the production of their personal research synopses, and ii) provided tools for, and experience with, systematic design of research projects (the overall course objective), respectively. Again, the students perceived reflections and e-tivities as

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[2] Survey was previously in appendix but has been removed to comply with length restrictions of this anthology.

the least two useful course exercises for question 11. In question 12, reflections were scored lowest, followed by e-tivities alongside the peer review report and group assignment.

The partial rationale behind marking as noted above is to induce participation which hopefully will produce learning. To approach an understanding of the truth of this assumption in this case, Questions 5-8 inquired about feelings of *affected participation* in relation to the same four activities of questions 1-4. Specifically the questions asked, 'To what extent do feel your participation in _____ was affected by the fact they are marked?'. The students' participation in all activities was more affected 'a lot' than 'not much', with the exception of the e-tivities which had an even share of both responses. Though the value of such findings are questionable for a number of reasons – not least the extremely low sample size- it still appears that *participation in reflections, for instance, was likely to be undertaken only because it was marked, rather than that the activity having more significant meaning to the students*.

In discussion at the end of the class, students gave some oral feedback. Some expressed appreciation at having multiple assessments, in light of the challenges of a single examination be it written or oral. This is echoed in research showing that students in higher education value the feedback that multiple assessment points can provide- particularly when the assessment provides more than simply correct/incorrect responses (Higgins, Hartley, and Skelton, 2002). The students also provided some written comments on the assessments as well as on the formal course evaluation. In these, most students praised course elements of one-on-one time with me and the peer review process.

A way forward?

Biggs, 2003 points out, "Matching individual performances against the criteria is not a matter of counting marks but of making holistic judgments". Based upon the reactions of the students and moreover, my own perceptions of the course, I strongly advise a reduction to the assessment regime, such as the following:

1. a personal synopsis – 1
2. a group assignment – 1
3. online quizzes – 5

In other words, each student would be assessed exactly 7 times in the course- yet the teacher will be responsible to complete assessment only twice per student, by utilizing thoughtful but *automated* online quizzes. The number of online quizzes is of course up for negotiation.

Consideration could also be given to changing the above entirely. The next Course Responsible might ask themselves, what is the value of the group assignments and need they be marked or not? Would an oral exam alongside the written synopsis be a better approach? Are online quizzes too rigid? Another option would be to make all or certain activities 'required' – but not marked- to be able to submit the final exam in the form of the written synopsis. The overarching issues for revision of this specific course (as any course) thus include: i) which elements are less useful vs. useless vs. harmful?, ii) which elements should be eliminated, and which should only have their marking eliminated?, and as always, iii) which elements best serve the intended learning outcomes?

Surely, it is difficult to find the right fit both for the teacher and the students. The tradeoffs between supposed increased participation, which necessitates time to mark by the teacher, against the opportunity for, for instance, more face to face time with the teacher, will have to be weighed by the next Course Responsible in Research Planning. The next Course Responsible might also consider talking with students at some stage in the course regarding the validity of various assessments, for instance asking them, which incidents of assessment contribute to the fulfillment of the ILOs and how, from their perspective?

Irrespective, it is with great conviction that I recommend a significant scaling down of the current assessment regime in this course, alongside a greater emphasis on time committed to meet the students face to face or to provide written feedback on their synopsis, which I believe serves better the achievement of this course's intended learning outcomes. This is particularly the case as being a multidisciplinary course, I had to commit extra time to immersing myself in very different proposed research plans. Sometimes I took extra time to engage colleagues for their input as well. While I perhaps did not have to do so (and this should be established within the didactical contract at the start of the course), the more I did, the better I believe I served the students and their learning outcomes. Such engagement also facilitates more balanced feedback (pointing out the 'goods' as well as the 'needs improvements'), than what a rigid correct/incorrect assessment format allows- which Brown et al., 2013 point out serves a critical motivational goal.

Concluding remarks

Though the validity of assessment structures is based in their alignment with learning, teaching and content knowledge, "the relationship is not straightforward and cannot be taken for granted" (James, 2006). Indeed, assessment structures often miss the mark in relation to a range of pedagogical aspects, from for instance new understandings of how learning occurs to the nature of the learning objectives. James, 2006 points out, "In the end however decisions about which assessment practices are most appropriate should flow from educational judgements as to preferred learning outcomes. This forces us to engage with questions of value – what we consider to be worthwhile – and, in a sense, is beyond both theory and method." To this end, I believe that the teacher's time in the RP course should prioritize direct relations with the students without being obscured by layers of more formal modes of assessment, followed by a simpler but still meaningful regime to provide the necessary mark of achievement. Such change would contribute toward moving from extreme toward balanced, or actual, alignment.

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This is number one and two in the eighth volume in a series of publications of educational development projects made by participants in the teacher development course for assistant professors and post-docs held by the Department of Science Education, University of Copenhagen.

The aim of the series is to provide insight into the kinds of educational tasks and problems new teachers are facing, and to show how they manage them in inspiring ways.

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