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Abstract

Feedback to students has been highlighted in the literature as an area where improvements are needed. Students need high quality, prompt feedback, but they also need guidance and tools to help them engage with and learn from that feedback. This case study explores staff and student perceptions of a tool at Sheffield Hallam University which releases electronic feedback to students before allowing them to access their grades. This approach was designed to encourage feedback engagement and connection with future assessments. The methods employed were student interviews and staff questionnaires about their experiences. The data were analysed to evaluate the effectiveness of this approach, create recommendations for institutions looking to improve feedback engagement and identify areas for further development.

Keywords: feedback, engagement, adaptive release

Introduction

Feedback is an integral feature of effective and efficient teaching and learning; the appropriate use of feedback can produce significant and substantial improvements in learning (Black & Wiliam, 1998; Gibbs & Simpson, 2004). Orsmond, Merry and Reiling (2000, p. 24) go further, claiming 'tutor feedback and student learning *should* be inseparable' to achieve the goals of assessment. Building on that point, Hounsell, Xu and Tai (2007) argue that assessment practices should allow students to learn from feedback and apply it to future assessments. Orsmond, Merry and Reiling (2005, p. 381) agree that feedback needs to be 'correctly acted upon' in order to be effective. It is not sufficient to receive feedback; students need to act upon feedbackin a manner which helps them learn. Gibbs and Simpson (2004) argue that techniques should be utilised to encourage this, including separating grades and feedback.

Previous literature has explored the concept of withholding grades to encourage student engagement with feedback, but much of the literature is theoretical rather than examples of practice. Potts (1992) claims that abolishing grades encourages students to engage with feedback, as they must construct their own ideas about the value of their work instead of relying on tutor judgments. Butler

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(1998) also determined that when students received feedback comments instead of grades, they performed better on subsequent tasks. Emphasising the importance of qualitative feedback over grades was seen to promote long-term learning instead of short-term achievement (Boud & Falchikov, 2006). Stevens and McBride (2006) foundthat their students engaged with feedback more when there was no grade.

Re-Engineering Assessment Practices in Scottish Education recommends giving 'feedback before grades to encourage students to concentrate on the feedback first' (Nicol, 2007). The use of audio and video feedback often inadvertently separates grades and feedback due to being removed from the original work. This has led to some calls to encourage engagement with multimedia feedback through processes that present the feedback first, then the grade later (Rotherham, 2009).

The Sheffield Hallam approach
Sheffield Hallam University has taken an approach to encouraging student engagement with feedback through the use of online adaptive release of grades. This case study explores student and staff perspectives where this approach was used, in order to identify issues and recommendations for others trying similar interventions. Adaptive release is generally defined as applying rules or criteria that govern the release of specific online content. At a basic level it is about only allowing students to see content that is relevant or appropriate to them. More advanced uses include requiring that students pass specific revision tests before they can access additional content. The adaptive release of grades is the process of not releasing grades until students have reflected on their feedback. When students go to view their result, they are prompted to reflect on how they can use their feedback to improve future assessments. Once they have reflected their grade become available automatically.

The use of adaptive release has become possible due to technological developments which can automate processes such as hiding content from students until criteria are met. This process of adaptive release of grades could still be accomplished without technology by a tutor returning feedback to

students and requiring that they write a reflection before returning their grades. However, technology removes much of the administrative burden in this process, and allows faster and easier access to grades and feedback. Technology and human intervention can be combined, as an approach at the University of Westminster demonstrated: students submitted reflections to feedback which were followed up with automated feedback and discussion with their personal tutor (Kerrigan, Clements, Oradini, Saunders & Bond, 2009).

To facilitate our desired approach, we commissioned the development of a tool, the Sheffield Hallam Assignment Handler, that allows the return of online feedback and grades for all assessments. Integrated into the feedback and grades part of the tool is the adaptive release of grades process. The Sheffield Hallam Assignment Handler integrates with the Blackboard virtual learning environment, placing feedback and reflectionsin the context of other learning materials. For more details on the approach used, see Hepplestone, Parkin, Holden, Irwin and Thorpe (2009).

We developed this approach to encourage a feed forward approach to learning, using feedback to improve future assessment performances, and address staff concerns about poorstudent engagement with feedback (Mutch, 2003). We also wanted to promote the value of linking feedback actions to personal development planning to enable future learning and development.

As a clarifying point, some staff and student quotes refer to 'marks' to mean grades, and 'marking' to mean grading, as these are common UK terms. Also, the term 'module' means an individual unit of study, often called a course in other institutions.

Methodology
The methodology employed was a case study exploring staff and student perceptions of, and experiences with, the implementation of adaptive release of grades at Sheffield Hallam University. The case study methodology was employed to better understand the effect of separating grades and

feedback in a specific context using data from those most affected (Robson, 2002). Using both staff and

student perspectives in developing formative assessment research is recommended by Yorke (2003).

Qualitative, semi-structured interviews were conducted with 23 students that experienced the

adaptive release intervention for the return of their feedback and grades. The interviews were part of a

wider research project called Technology, Feedback, Action! (Hepplestone et al, 2009). They explored

student perceptions of the benefits to adaptive release and their experiences using it.

25 staff members completed an open-response questionnaire about their experiences

implementing the adaptive release approach (Hepplestone, 2008). The questionnaire was done with

staff members that adopted it during its first year. Both the questionnaire and interview data were

analysed using a thematic approach to determine common themes across respondents (Seale, 2004).

The authors also contributed their perspective of having designed the original concept for the

adaptive release approach. The different perspectives of designers, implementers, and users have

created a rich picture which captures the experience of adaptive release at the university.

Findings

Student perceptions
The student interviews covered a range of uses of technology to enhance grades and feedback. The

general findings of these interviews are covered by Parkin, Hepplestone, Holden, Irwin and Thorpe

(under review), while this paper solely focuses on adaptive release of grades. During the interviews,

students described three main benefits to the adaptive release process: greater engagement with their

feedback, better memory of the feedback and the ability to set action points about what to improve for

future assessments.

Benefits
The adaptive release approach led to students being more likely to engage with their feedback. Students

described this engagement as not only reading, but also thinking about and interpreting feedback:

> It makes you think about your feedback.
> We'd actually have to read it, interpret what that means

The students expressed engagement using words such as 'makes you' and 'have to', implying this approach forces participation where they might not normally engage. Getting students to engage with feedback is particularly important as some students said 'some students get feedback and it just goes straight over their head or they just throw it to one side'.

The second benefit was that students felt the process of engaging with their feedback before viewing the grade led to remembering the feedback for longer, probably because of the deeper engagement with it. Students described the reflective part as an important reason for this longer memory, as it encouraged thinking and looking ahead:

> I think you probably would remember it a bit more, especially because I think they ask you to write what you'd do in the future.
> I do think it's good writing a reflective bit because then you kind of process the feedback because sometimes you just read it and think and then forget about it.

One student went further, suggesting that not only is the memory of the feedback on that assessment better, but that it was also easier to remember points for improvement during future assessments:

> If I have to reflect on the feedback before receiving the grade then it sticks in my mind a bit longer, the feedback I receive, the points that I'm going to use and it's a little bit easier to remember when I'm working on my next assignment.

The third main benefit identified was the ability to set targets for improvement for future assessments. Many students saw the reflection process as valuable for setting action points to help them perform better in the future. Undergoing a reflective experience led those students to engage with their feedback differently, looking forward instead of solely reviewing past performance:

> You can look back on what you've been doing, you can reflect on how you're going to improve.
> I would maybe make a point-by-point reflective answer about where I do think I've gone wrong and what steps I need to change it for next week

Concerns

Analysis of the student interviews also identified some concerns about the adaptive release process, including misunderstanding the purpose of the reflection, a perception of receiving a grade as the

primary goal of assessment processes and the reflective element being perceived as an additional

hurdle.

Some students did not see any benefit to the process of writing a reflection on their feedback,

mostly due to confusion over the purpose of the written reflection. Those students did not understand

the goals of adaptive release and were concerned about where their reflections went afterwards, leading

to reluctance to write true reflections:

> I don't understand who I'm writing this thing to and what different it's going to make. Whether it's for my
> benefit or their benefit.
> I don't know where that gets stored, I don't know whether it goes to the tutor or anything.

Another misconception was that the purpose was to share the reflection and action points back

with the tutor, which students were hesitant about: 'I know what I feel so I don't know why someone

else wants to know that kind of thing I suppose'. In reality the lecturers are unable to see the personal

reflections unless the student shares them. Similarly, another student thought the purpose of the

reflection was to self-assess:

> I'd take it more seriously if I knew that they were going to read it before actually giving me my mark...they'd
> actually read my comments and see where I was coming from on it

Finally, some students thought they were giving feedback to the lecturers about the assessment

itself. Those students used the reflective space to write suggestions for how to improve the assessment

or the lecturer's feedback, rather than writing something for their personal learning benefit:

> [The feedback]'s something [the tutors] can look at as well and maybe they'll change the way they approach
> the assignment and they might offer more help... It's a bit of hassle to then have to give them feedback, for
> them to give you feedback.

These misconceptions resulted in the students not completing the reflective task in the manner

intended, meaning they did not set action points for future improvement and would have been less

likely to benefit from the approach. This shows the need to clearly explain to students why adaptive

release is being used, the purpose of the reflection and how the reflective space works.

Another finding was that many students expressed concerns about not receiving a grade

initially. They had a strong desire to know their grade as an external validation of their work, rather

than placing importance on the feedback and the learning to be gained from it. Indeed, some students

generally thought grades were more important than feedback:

> I think that more people are just interested in getting their grades rather than doing the whole feedback thing.
> I just want my mark.

This is especially highlighted in the following student's description of the assessment process

which excludes any mention of feedback:

> I think it's possibly one step too far, because you've done the work, you've submitted the work, the work's
> gone through the process of being marked, and then you've got something else to do before you can
> acknowledge your grade.

The lack of feedback in the description emphasises this perspective that 'acknowledging your

grade' is the goal and end point of the assessment process. These students did not recognise learning

from feedback as an outcome in the process, and therefore were not able to engage with the conceptual

foundation of the reflective process.

As a result of this emphasis on receiving a grade, the reflective process was viewed as having to

'jump through a further hoop'.   This sentiment that the reflective process was an additional,

unnecessary step was shared by some other students:

> I've done the work so I want the mark, I don't see why I should then have to do further explanation to then
> receive the mark.
> I just sort of say 'Yes I find the lecturers comments fair and I'll do better next time' just to click that button and
> get my mark because that's what everybody's worrying about.

This type of rushed, tokenistic engagement with the reflection process is not likely to produce

high quality reflections and learning. It shows that as the reflectors, students must recognise the value

of learning from feedback to improve future assignments before the benefits can be realised. It also

highlights the need to shift perceptions of the goal of the assessment process away from grades and

towards learning.

Staff perceptions

Staff responses to the questionnaires about their experience with the tool tended to focus on technical

troubles either they or their students encountered rather than any potential learning benefits. This is not

surprising, as many of these learning benefits are not as visible to staff as to students, because the

benefits extend across different modules students study on and are about a student's personal learning rather than the whole class. As a result of the reflections spanning multiple assessments and modules, the utility of the reflective and action setting process is challenging for staff members to see. One noted, 'I'm not sure students fully engage with the feedback,' but commented that it would be difficult to know the effect of the reflection now, as it was linked with assessments 'at a later point in the year'. The tool also had some early technical issues which probably shaped the perceptions of staff members using it and dominated the comments.

Most of the comments did not discuss the reflective process. When the process arose, it was where having students reflect on feedback challenged existing feedback practices, more than likely as a result of student complaints when recognising this incompatibility. For example, one staff member noted that students writing a reflection was 'difficult (impossible?) to do, if formative feedback not given' as their policy was to only provide feedback to students who requested it after viewing their grade. Giving feedback to all students should be a consistent assessment practice, so in this case this tutor's practice was in conflict with good feedback practice in general rather than just the adaptive release of grades.

Another staff member said they did not like the online reflection element as they used a more collaborative face-to-face process for reflection which meant they felt the online one was redundant: 'Students receive feedback (via suggested answers sheets and discussion) in a self assessment workshop, held before I formally assess their work for a mark'. However, having in-class self-assessment does not preclude students reflecting upon their feedback to derive action points for future assessmentsonline as well, so this practice did not actually conflict with the adaptive release approach.

One staff member, similarly to some students, did not grasp the purpose of the reflection and believed students were providing feedback themselves rather than a reflection: 'Students have to give feedback to get their marks. That is silly - what are they feeding back on?' On the opposite side of the

spectrum, one staff member believed that knowing the students would reflect on the feedback 'forces you to think about the links between learning outcomes, marks and feedback comments' and led to better, more objective feedback. These findings indicate that it is equally important that staff members grasp the conceptual and boundary changes to the assessment process that the adaptive release of grades brings as it is for students.

Discussion
Overall, students identified strong positive benefits of using adaptive release of grades. The approach encouraged greater engagement with feedback, contrary to Nesbit and Burton's (2006) description of usual feedback practice where students are mostly concerned with grades. Students also remembered their feedback longer when using this approach. If students cannot remember their feedback when doing future assessments, it would be difficult to use it to improve performance on those assessments, a primary goal for feedback that encourages learning (Hounsell et al., 2007). Besides helping to improve future assessments through remembering the feedback better, the reflective component also encouraged setting specific action points to improve upon. Rust (2002, p. 153) cites that 'research evidence would also suggest that just giving feedback to students without requiring them to actively engage with it is likely to have only limited effect.' Turning feedback into action was also stressed by Gibbs and Simpson (2005) and Orsmond et al. (2005) as crucial, suggesting this approach has merit in encouraging good feedback practice.

However, the findings also highlighted some concerns, such as a need for consistent, high quality feedback when using adaptive release of grades. Some existing staff feedback practices, such as students not receiving feedback, or where the feedback was unclear or difficult to relate to future assessments, made it difficult for students to reflect on the feedback and set action points. This affirms that feedback needs to be written with feed forward capacity so it can be linked to future assessments (Hounsell et al., 2007).

The separation of grades and feedback may influence the way feedback needs to be written by staff to be considered high quality. For example, a comment such as 'You really should have included more in the second section.' has a different interpretation when associated with a high grade than with a low grade. Without a grade associated this is an ambiguous comment that should be clarified so students understand the importance of the changes needed. Students may be reading their feedback more closely for information about their performance, so clarity is essential.

Another feature of our approach that became evident during the analysis is that adaptive release shifts the boundary of the assessment process. Instead of the receipt of the grade/feedback being the end of the process, there is an explicit step of reflecting on the feedback to set action points. This in turn leads to the potential use of those action points and past feedback in future assessments. Many students recognised the additional step that was occurring 'something else to do', 'another transaction', and 'a further hoop', but those same students did not see the potential blurring of the lines after the assessment task. They still perceived the assessment and feedback as having a discrete end instead of blurring into future assessments. Teaching staff play a strong role in encouraging students to set action points and refer back to them in future assessments, so it is important that they understand the extended boundary and integrate it into existing assessment processes.

The introduction of adaptive release into the process needs to be accompanied with a shift in thinking about the assessment process to have maximum benefit. Where assessments feed forward into each other explicitly, this seems more likely to occur. Kerrigan et al. (2009) tackled this problem of linking assessments together differently, by utilising personal tutors in the discussion of feedback reflections, as teaching staff often change between modules.

Some students took an instrumentalist approach to the forced reflection, merely typing something quickly rather than taking the time to reflect. This is probably a response to the instrumentalist nature of the approach we have taken of leveraging student concerns about grades to

force engagement with feedback. Deemphasizing the importance of grades, explaining the process and helping students recognise the value of reflecting on feedback should discourage students from taking an instrumentalist approach.

Adaptive release as a concept is about controlling the flow of certain learning processes, with the goal of increasing student engagement. It provides restrictions on what learners can do, taking an instrumentalist approach to encouraging engagement. In this way it is rooted more strongly in the behaviourist philosophy of education, which posits that learning is achieved through repetition and mastery of specific learning steps. However, in many ways the entire assessment process can be perceived as a behaviourist approach to learning. Learners often do not have control over the assessments they engage with, and where they do have control, it is often limited within specific boundaries (such as topic selection). Grades are often used as a motivational tool, by providing a sense of satisfaction when good but also pressure to improve when poor. Shepard (2000) points out that both the valuing of external awards such as grades instead of learning and power relationships around assessment are lingering concepts from behaviourist learning theories.

One student thought the process of adaptive release was a 'carrot and stick' (reward and punishment) approach. It is not clear if they perceived the withholding of the grades and the need to reflect on them as a punishment or the giving of grades as a reward. Either way it raises issues about how students perceive the assessment process, where learning is seen as a punishment and grades as the reward and area for most emphasis. Some students in the study were more concerned about getting their grades than learning from their feedback. Nesbit and Burton (2006) comment that students place so much importance upon the grade that they become less likely to engage with feedback if they feel the grade is unjust. Student preoccupation with grades can have a negative impact on both learning and motivation (Black and Wiliam, 1998).

Learning should ideally be the ultimate goal of our educational processes, and learning often comes from reflecting on our experiences (Fry, Ketteridge & Marshall, 1999). We need to find ways to promote learning as the carrot and shift away from a dependency on grades as motivational tools. However it seems unlikely the entire educational system will change away from the current emphasis on grades, so we must stress the importance of learning and feedback's role in it.

Recommendations

There are some recommendations from our case study for other institutions implementing an adaptive release approach for grades and feedback.

Good communication with students can help avoid misconceptions about the purpose of the adaptive release and reflective element. Students need to reconceptualize that the assessment process has been lengthened, with feedback leading to action for future assessments. After receiving their feedback they need to reflect and should be prepared for that to avoid stress, concern or confusion. There are underlying messages about the importance of feedback compared to grades when adopting this approach which students and staff need to buy into so learning is recognised as the goal of the assessment process.

As teaching and support staff have the most contact with students and will often provide the instructions and deliver the rationale, achieving staff buy-in to the underlying goals and reasons behind its use is essential. Staff should also understand clearly how the approach works from both the staff and student perspective, as they will need to explain it and provide early support for students.

If the tool is made mandatory for online submission, it will provide consistency for the student experience of engaging with their grades and feedback, but also may be perceived by some staff as a loss of control over their teaching environment or, more accurately, the student learning experience which teachers normally exercise a strong influence on. If there are alternate ways for staff to return

grades and feedback to students, it may be necessary to convince staff to adopt the unfamiliar adaptive release approach.

Students need feedback that they understand and can use to generate action points for the future. Staff should write feedback that is clear to students and written so that it stands apart from the grade. Feedback should be consistently given, and preferably available online so as to integrate with the adaptive release process.

Conclusion

This case study has explored staff and student perceptions of an adaptive release intervention which separates grades and feedback and prompts reflection. Students felt they engaged more with their feedback and remembered it better as a result of this approach, but expressed concerns about their ability to focus on the feedback due to preoccupation with their grade, seen as the principal outcome of the assessment process. Some students and staff members were also confused about the purpose of the reflective element.

For feedback to be an effective learning tool, it must be an important part of future assessments as well as the current one. The findings suggest that there is a need for educating both students and staff about this change in the boundaries of the assessment/feedback process. Having an adaptive release process which separated grades and feedback highlighted this change by creating an additional step linking the current assessment with future ones.

Possibilities for future development include making the process of feeding forward into future assessments more explicit by introducing additional processes. For instance, reflections could feed more directly into student personal development spaces such as portfolios. Another possibility is automatically reminding students of their action points at key times. Feedback reflections and action points could also be consolidated across all of a student's courses to give a more holistic view to the student and any support staff or personal tutor that may assist them. A longitudinal study of adaptive

release of grades would help to better understand the approach after users have overcome initial

confusion about the tools and eliminate any effect caused by novelty.

Overall the adaptive release of grades was found to be effective for increasing engagement with

feedback, with technology playing a vital role in enabling this to happen efficiently. Challenges remain

around staff and students understanding the value of feedback and reflection on it to promote learning,

as well as some underlying general challenges with getting staff to engage with onscreen grading and

feedback.

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References

Black, P. & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education, 5*(1), 7-74. doi:10.1080/0969595980050102

Boud, D. & Falchikov, N. (2006). Aligning assessment with long-term learning. *Assessment & Evaluation in Higher Education, 31*(4), 399-413. doi: 10.1080/02602930600679050

Butler, R. (1988). Enhancing and undermining intrinsic motivation: The effects of task-involving and ego-involving evaluation of interest and performance. *British Journal of Educational Psychology, 58*(4), 1-14.

Fry, H., Ketteridge, S., & Marshall, S. (Eds.). (1999). *A handbook for teaching and learning in higher education. Enhancing academic practice*. London: Routledge Falmer.

Gibbs, G. & Simpson, C. (2004). Conditions under which assessment supports students' learning. *Learning and Teaching in Higher Education, 1*, 3-31. Retrieved from http://www2.glos.ac.uk/offload/tli/lets/lathe/issue1/articles/simpson.pdf

Hepplestone, S. (2008, May). *Useful feedback and flexible submission: Innovative assignment management through Blackboard*. Paper presented at BbWorld Europe '08, Manchester, UK.

Hepplestone, S., Parkin, H.J., Holden, G., Irwin, B. & Thorpe, L. (2009). *Technology, Feedback, Action!: The impact of learning technology upon students' engagement with their feedback* (Higher Education Academy Enhancing Learning Through Technology Research Projects 08/09). Sheffield: Sheffield Hallam University. Retrieved from http://evidencenet.pbworks.com/f/TFA_Final_Report.pdf

Hounsell, D., Xu, R. & Tai, C.M. (2007). Balancing assessment of and assessment for learning (Scottish Enhancement Themes: Guide to Integrative Assessment, No. 2). Gloucester: QAA.

Retrieved from:
http://www.enhancementthemes.ac.uk/documents/IntegrativeAssessment/IA%20Balancing%20assessment.pdf

Kerrigan, M.J.P., Clements, M.O., Oradini, F., Saunders, G. & Bond, A. (2009, July). *eReflect: enhancing student support through a reflective online process*. Paper presented at BbWorld '09, National Harbor, MD.

Mutch, A. (2003). Exploring the practice of feedback to students. *Active Learning in Higher Education, 4*(24), 24-38. doi:10.1177/1469787403004001003

Nesbit, P.L. & Burton, S. (2006). Student justice perceptions following assignment feedback. *Assessment & Evaluation in Higher Education, 31*(6), 655-670. doi:10.1080/02602930600760868

Nicol, D. (2007). *Improving assessment after the task.* Re-Engineering Assessment Practices in Scottish Education (REAP) online resources. Retrieved from http://www.reap.ac.uk/nss/nssAfter02.html

Orsmond, P., Merry, S. & Reiling, K. (2000). The use of student derived marking criteria in peer and self-assessment. *Assessment & Evaluation in Higher Education, 25*(1), 23-38. doi:10.1080/02602930050025006

Orsmond, P., Merry, S. & Reiling, K. (2005). Biology students' utilization of tutors' formative feedback: a qualitative interview study. *Assessment & Evaluation in Higher Education, 30*(4), 369-386. doi:10.1080/02602930500099177

Parkin, H.J, Hepplestone, S., Holden, G., Irwin, B. & Thorpe, L. (2010). *A role for technology in enhancing student engagement with feedback*. Manuscript submitted for publication.

Potts, D. (1992). Case study: You can't teach those things to rats. A case for neither grading nor failing students. *Educational and Training Technology International, 29*(4), 296-309. doi:10.1080/0954730920290404

Robson, C. (2002). *Real world research* (2nd ed.). Oxford: Blackwell.

Rotherham, B. (2009). *Sounds good: Quicker, better assessment using audio feedback.* JISC-funded project. Retrieved from http://sites.google.com/site/soundsgooduk/downloads

Rust, C. (2002). The impact of assessment on student learning: How can the research literature practically help to inform the development of departmental assessment strategies and learner-centred assessment practices? *Active Learning in Higher Education, 3*(2), 145-158. doi:10.1177/1469787402003002004

Seale, C. (2004). *Researching Society and Culture* (2nd ed.). London: Sage.

Shepard, L.A. (2000). The role of assessment in a learning culture. *Educational Researcher, 29*(7), 4-14. doi:10.3102/0013189X029007004

Stevens, V. & McBride, N. (2006). *Removing the grade from a formative assessment*. Formative Assessment in Science Teaching (FAST) project case study. Retrieved from http://www.open.ac.uk/fast/pdfs/Valda%20Stevens.pdf

Yorke, M. (2003). Formative assessment in higher education: Moves towards theory and the enhancement of pedagogic practice. *Higher Education, 45*, 477-501. doi:10.1023/A:1023967026413