



## Chat Transcript for Session Topic: Raising students' meta-cognition (self-assessment) abilities

Discussion of  
Gardner-Medwin and Curtin "Developing Certainty-Based Marking (CBM) for reflective learning and proper knowledge assessment"  
Winning, Lekkas and Townsend "Developing clinical self-assessment skills in first-year dental students"

Facilitated by  
Nigel Watson  
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Moderated by  
Jane Mackenzie  
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Date/Time	Author	Comment
30/05/2007 09:09:24	<b>Jane MacKenzie</b> (Jane (Moderator))	Good morning and welcome to the Raising students' meta-cognition (self-assessment) abilities. We have two papers. The first by Tony Gardner-Medwin from University College London and Nancy Curtin from Imperial College London is entitled "Certainty-Based
30/05/2007 09:10:06	<b>Jane MacKenzie</b> (Jane (Moderator))	Our facilitator is Nigel Watson from University of Strathclyde and I'm going to be moderator and I'm Jane MacKenzie from the University of Glasgow.
30/05/2007 09:10:52	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	CBM is easy to use with any objective Qs you already have - see the website.
30/05/2007 09:11:15	<b>Catherine Owen</b> (CatherineOwen)	Tony - do students understand readily what is expected of them?
30/05/2007 09:12:17	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	We hardly explain anything. The idea that you shouldn't take a risk unless you're pretty sure of your answer is pretty intuitive.
30/05/2007 09:12:37	<b>Tracey Winning</b> (TraceyWinning)	for clinical self-assessment - it does take some effort, but we believe it is a critical aspect of their learning so worth it
30/05/2007 09:12:49	<b>Nancy Curtin</b> (nacurtin)	Catherine, The students do need practice at CBM but they seem to grasp it easily when they try it. It is much harder to explain to staff who have not tried it.
30/05/2007 09:13:19	<b>Tracey Winning</b> (TraceyWinning)	the use of the workshops the past 2 y have also paid off but data is preliminary
30/05/2007 09:13:31	<b>Catherine Owen</b> (CatherineOwen)	Does the possibility of negative marks ever disincentivise?
30/05/2007 09:13:50	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	Students of course can read and think more about the principles of CBM, the graphs and suchlike. That itself is good for them! Then of course, as Nancy says, they must practice to get good judgement.
30/05/2007 09:14:13	<b>Wafa-Makky Nichols</b> (WNichols)	does it have a positive effect on student learning (not that this is the easiest thing to assess!)



30/05/2007 09:14:19	<b>Nigel Watson</b> (NigelWatson)	Tony, what kind of feedback have you had from other users outside of your course or university have you had?
30/05/2007 09:14:22	<b>Kenji Lamb</b> (klamb)	With CBM, do students become discouraged if they receive an overall negative mark? (or even a significantly low mark given the potentially stiff penalties for wrong answers)
30/05/2007 09:14:56	<b>Jane MacKenzie</b> (Jane (Moderator))	Oh the questions are coming thick and fast. Can we start with the student learning Q.
30/05/2007 09:15:53	<b>Nancy Curtin</b> (nacurtin)	Catherine, The problem of disincentivation is less a problem than old-type negative marking was. Students think that choosing among the Certainty levels is more "fair" than a single imposed level of penalty (or reward).
30/05/2007 09:15:58	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	Lots of med students and BMAT (med applicants) use it. The f/b when offered is generally (?always) positive, but it's hard to separate whether they like the testing interface and immediate feedback, or genuinely like the CBM for itself.
30/05/2007 09:17:11	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	If a student gets -6 (wrong when sure) they wake up. A great thing online is that they will comment if they think they have been unfairly marked.
30/05/2007 09:17:49	<b>Nancy Curtin</b> (nacurtin)	klamb, in fact students only end up with an overall negative mark the first time they try it. They seem to learn fast how to avoid this.
30/05/2007 09:18:35	<b>Wafa-Makky Nichols</b> (WNichols)	I can see it has advantages for staff (I'd like to see if I'd left a large % of my students feeling "iffy" about something) but how does it improve student learning
30/05/2007 09:18:46	<b>Tracey Winning</b> (TraceyWinning)	is there any relationship between accuracy and level of confidence?
30/05/2007 09:19:02	<b>Tracey Winning</b> (TraceyWinning)	sorry, certainty
30/05/2007 09:19:02	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	Student learning. Something students very often say is that CBM helps them identify areas where their knowledge is weak or tentative.
30/05/2007 09:19:26	<b>Chris Redwood</b> (credwood)	I am interested in how the development of self assessment skills stimulates learning, and part of the cbm is the immediate feedback. Is there any indication this assessment method has produced more logical or proficient clinicians
30/05/2007 09:22:07	<b>Jane MacKenzie</b> (Jane (Moderator))	Credwood has brought up the topic of self-assessment and feedback which makes sense. Tony you mentioned that they must develop good judgement. Are these the same?
30/05/2007 09:22:43	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	Accuracy & confidence. Yes of course. Those who know the stuff usually know they know it, and if they don't, they develop more confidence. Only mismatch (in the 2003 paper) is with really weak students, who tend to be overconfident.
30/05/2007 09:23:02	<b>Nancy Curtin</b> (nacurtin)	credwood, The clinicians here at Imperial like the recognize the sense in the basic idea of CBM and there has been some use in small group sessions, but not in use long enough to have an impact of graduating students.
30/05/2007 09:23:11	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	Sorry. Phone just rang.
30/05/2007 09:23:21	<b>Pat Maier</b> (pjm)	We have been trialling a system where stds assess themselves against the mark criteria, the lecturer assesses in the next column and stds get a bonus mark if they are close the the lecturer. Std's are also then asked to use their own assessment as a focus



30/05/2007 09:24:53	<b>Wafa-Makky Nichols</b> (WNichols)	Would it be possible to have a CBM where the answer was not simply right or wrong but in fact the best student response would be "yes but not absolutely sure" in a situation for instance where the vignette(sp?! ) hadnt given sufficient data or co
30/05/2007 09:24:55	<b>Jane MacKenzie</b> (Jane (Moderator))	Back to the issue of mismatch. klamb asked: With CBM, do students become discouraged if they receive an overall negative mark? (or even a significantly low mark given the potentially stiff penalties for wrong answers)
30/05/2007 09:25:24	<b>Tracey Winning</b> (TraceyWinning)	the overconfident students - can you track how well their knowledge develop with practice or does their accuracy improve
30/05/2007 09:26:00	<b>Nigel Watson</b> (NigelWatson)	That is an interesting point - tracking development for a student
30/05/2007 09:26:07	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	Better clinicians? Senior clinicians have often been shown unfortunately to overestimate confidence in their conclusions. Teachers do try to use CBM and relate the (tiny) penalty of -6 to the disastrous consequence of a confident misdiagnosis.
30/05/2007 09:26:53	<b>Vanessa Scholes</b> (schvan)	Pat, are you assessing answers to objective questions, or subjective questions as well?
30/05/2007 09:27:13	<b>Nigel Watson</b> (NigelWatson)	Is this something specific to medicine?
30/05/2007 09:27:28	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	The weak overconfident students I mentioned are usually VERY weak, and we take care to demonstrate that they are failing because they get nothing right, not only because they think they are getting things right.
30/05/2007 09:27:57	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	In other words we kick them out and don't track them!
30/05/2007 09:28:35	<b>Pat Maier</b> (pjm)	Schvan in this trial it was subjective answers where students estimated how well they had achieved several criteria. A single page mark sheet is used with columns for both std and tutor marks and then room to ask for/provide specific feedback.
30/05/2007 09:29:14	<b>Kenji Lamb</b> (klamb)	A lot of the lecturers I've spoken to are very interested in using CBM in online assessment, though as you point out in the paper, this isn't supported in any of the mainstream VLES... Does anyone know of work being done in this area?
30/05/2007 09:29:26	<b>Nancy Curtin</b> (nacurtin)	Nigel, No I don't think any of this is specific to medicine. In any real life task, one has to decide whether to proceed or to seek further info, guidance, help
30/05/2007 09:30:48	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	sorry i'm NOT READING ALL THE POSTS PROBABLY. Whoops. Is CBM specific to medicine? No. Perhaps its mainly medics and engineers who kill people by failing to judge certainty realistically. So the stakes are highest and most obvious for them. But candid exp
30/05/2007 09:31:09	<b>Alison Muirhead</b> (AlisonMuirhead)	Nancy/Tony - is CBM being used in other disciplines in your institutions?
30/05/2007 09:31:20	<b>Jane MacKenzie</b> (Jane (Moderator))	re: medicine specific. My experience is that 'negative marking' a form of CBM is used in vet medicine and I suspect that Tony is right there is a feeling in the health professions that a partially right answer won't do.
30/05/2007 09:31:37	<b>Vanessa Scholes</b> (schvan)	Thanks Pat. Tony, do the students get provided with the actual justification that would justify a C=3 rating once they have submitted their answer, if they didn't rate themselves that highly or got it wrong?



30/05/2007 09:32:41	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	For Moodle there is now a means of translating Moodle Q formats for CBM. I think I refer to this in the paper - thrwise, it's on the website. I would really like to see Qmark and VLE vendors take this up. You should pester them.
30/05/2007 09:33:04	<b>Kenji Lamb</b> (klamb)	Should CBM be used for summative assessment?
30/05/2007 09:33:54	<b>Nigel Watson</b> (NigelWatson)	Tracy , some discussion of exportability of the approach. With reference to your clinical self-assessment in dental students.Can this experience be exported to disciplines different from dentistry?
30/05/2007 09:34:42	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	Other disciplines. It's frankly been hard to get staff in other fields to move out of their inertial box. I have a major project to use it for ESL (English as a second language).
30/05/2007 09:34:47	<b>Tracey Winning</b> (TraceyWinning)	We think it can/should be - health professions, law etc - others will have experience
30/05/2007 09:34:56	<b>Nancy Curtin</b> (nacurtin)	klamb, It has been used in summative assessment at UCL, but not at Imperial (yet at least). Part of the experience at UCL has been that once the students got the hang of it, they wanted CBM on summatives because they were more in control of the marking p
30/05/2007 09:35:24	<b>David Nicol</b> (DavidNicol)	Should you not be getting students to create these CBM questions?
30/05/2007 09:35:58	<b>Wafa-Makky Nichols</b> (WNichols)	do students just see it as a way of hedging their bets?
30/05/2007 09:36:33	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	schvan: F/b about why things are right or wrong can and is often provided in the exercises. But of course one can't tell what reasoning led a S to be sure of a right or wrong answer.
30/05/2007 09:37:43	<b>Nancy Curtin</b> (nacurtin)	David Nichol. Yes, I've had students doing summer project writing exercises for use in CBM self-test modules. Their work is checked by the relevant teachers. This has been very successful.
30/05/2007 09:38:00	<b>Kenji Lamb</b> (klamb)	Nigel: When I was a student teacher, it was common practice to self-evaluate performance during placements/practice activities. We were also required to note down strategies for improvement.
30/05/2007 09:38:25	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	David: We do quite a bit of student authoring, with staff vetting. Especially valuable to all is getting students to write explanations why existing Qs have the answers they do. The data on numbers of wrong confident answers are especially useful in ident
30/05/2007 09:39:15	<b>Nigel Watson</b> (NigelWatson)	Same for me but we had a lot of help from tutors, and indeed other teachers, so a lot of staff input was needed
30/05/2007 09:39:49	<b>Alison Muirhead</b> (AlisonMuirhead)	Tracey, what feedback have you had from students on your approach to self-assessment?
30/05/2007 09:39:58	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	WNichols: You can't really hedge. You will always do best by making your best estimate of how likely you are to be right, and then expressing this correctly with the 1,2,3 scheme.
30/05/2007 09:40:00	<b>Tracey Winning</b> (TraceyWinning)	what help was provided, how often?
30/05/2007 09:40:25	<b>Tracey Winning</b> (TraceyWinning)	generally students acknowledge the value though there are some who prefer not to



30/05/2007 09:40:36	<b>Pat Maier</b> (pjm)	I also feel that the process of self evaluation is critical here which is why we use it for more open ended assessment. We feel it does give the stds confidence in knowing there are different ways of doing things, able to accept other methods, but confid
30/05/2007 09:40:48	<b>Tracey Winning</b> (TraceyWinning)	we stress the reflective practitioner aspect/need to contintue to learn
30/05/2007 09:41:18	<b>Nigel Watson</b> (NigelWatson)	Tracy, do you mean they didn't like it but didn't like to say?
30/05/2007 09:41:18	<b>Jane MacKenzie</b> (Jane (Moderator))	Tracey. I have a question. How resistant are your first year students to the idea that they can assess themselves and that this is a useful skill?
30/05/2007 09:41:59	<b>Tracey Winning</b> (TraceyWinning)	Nigel: they do say if they don't like
30/05/2007 09:42:07	<b>David Nicol</b> (DavidNicol)	Are there ways of using these CBM tests in combination with peer working so that students get extra benefit from dialogue with others about reasons behind answers?
30/05/2007 09:42:31	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	Isn't it the job of a uni to train people to know what good work is?
30/05/2007 09:42:39	<b>Tracey Winning</b> (TraceyWinning)	Reasonable resistance, often related to not undersntading the process, hence our development of the workshops
30/05/2007 09:44:10	<b>Nancy Curtin</b> (nacurtin)	DavidNicol. It seems to me that the most useful sessions I've observed were 2 students working together on a CBM exercise where they discussed questions, possible answer, what C to enter, then discussed the explanation that was given after the answer was
30/05/2007 09:44:12	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	David: Yes. Most of our use of CBM is voluntary and we encourage students to work together. I forget exactly, but in a survey students divided in wherther they preferred to work alone or in pairs typically.
30/05/2007 09:45:58	<b>David Nicol</b> (DavidNicol)	Maybe requires a balance of solo and group work as suggested by steve in his paper?
30/05/2007 09:46:51	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	CBM in relation to assessment OF learning: Doesn't a student who has a frim misconception deserve to be rated worse than one who acknowledges uncertainty. Which would you prefer as a doctor/ engineer/ financial advisor?
30/05/2007 09:47:24	<b>Jane MacKenzie</b> (Jane (Moderator))	Tracey, Presumably self-reflection a theme of your Dental Education. Basically, have your students become more reflective by the end of their degree - do you see a big shift in terms of their development? Has this been influenced by the introduction of
30/05/2007 09:47:32	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	firm not frim, though it's a nice word!
30/05/2007 09:47:42	<b>Nancy Curtin</b> (nacurtin)	David. Yes, I think so. Both are needed. Best if work can be timetabled, but voluntary.
30/05/2007 09:48:28	<b>Tracey Winning</b> (TraceyWinning)	Jane, good question, not looked at this carefully
30/05/2007 09:48:54	<b>Alison Muirhead</b> (AlisonMuirhead)	Have you looked at whether more vocal students convince quieter ones into wrong (or right) answers in group work?
30/05/2007 09:49:38	<b>Tracey Winning</b> (TraceyWinning)	in employer ratings of grad one of items relates to awarenees of own limitations I can't remember the data exactly, but was reasonable and generally matched grad evaluation



30/05/2007 09:49:38	<b>Pat Maier</b> (pjm)	Tony - agree, a firm misconception results in a lower mark, but the process of self assessment that is wildly wrong in itself has a deeper learning effect I think than just a low mark. If you reflect and put down on paper what you think you should get and
30/05/2007 09:49:51	<b>David Nicol</b> (DavidNicol)	this does not seem to happen in peer instruction scenario so some evidence in Mazur's work on that, Alison.
30/05/2007 09:50:30	<b>Nancy Curtin</b> (nacurtin)	Alison, My experience is that when working in pairs there is less of a problem about the more vocal ones dominating. They seem more respectful of each other one-on-one, than in groups of for example 10.
30/05/2007 09:50:42	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	Back to David I think: Should you not be getting students to create these CBM questions? I should stress that there is no such thing as a "CBM Question". Any question that has a right/wrong criterion for answers can be assessed with CBM or witho
30/05/2007 09:51:25	<b>David Nicol</b> (DavidNicol)	my point was just that it would be empowering for them to create questions not just take them.
30/05/2007 09:51:46	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	yes, agreed
30/05/2007 09:52:01	<b>MArk Russell</b> (MarkRussell)	And that is so very powerful - from my experince
30/05/2007 09:52:24	<b>Pat Maier</b> (pjm)	I think I have been working under a misconception that CBM was for subjective assessment as well - it appears not from the messages so far. Is it only for objective right/wrong answers?
30/05/2007 09:53:09	<b>Tracey Winning</b> (TraceyWinning)	just found the data - over 75% of employers rated grads as good or very good in being aware of limitations
30/05/2007 09:53:38	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	pjm: Re loss of face. /b that leads to loss of face (=humiliation?) is risky. I see that as one of the big merits of computers, to set against all their drawbacks compared with teachers. Computers don't humiliate and thereby discourage students.
30/05/2007 09:53:38	<b>Pat Maier</b> (pjm)	Tracey is there a way of sending this ref?
30/05/2007 09:53:41	<b>Rachel Harris</b> (rachelharris)	Does that differ from before you introduced the workshops?
30/05/2007 09:54:07	<b>Jane MacKenzie</b> (Jane (Moderator))	Tracey: just wondered if your grads are better in this respect than those who don't expereince self-assessment? Anyone got any ideas?
30/05/2007 09:54:16	<b>Tracey Winning</b> (TraceyWinning)	the workshops are only 2 years old so only impacting up the 2nd y - we have tutor focus group data to be analysed
30/05/2007 09:54:34	<b>Tracey Winning</b> (TraceyWinning)	and was planning on maybe trying to get some data from current 2nd y tutors
30/05/2007 09:55:04	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	pjm: Yes. Only objective Qs. You may be sure your preference for Titian over Rubens agrees with your teacher's, but you can't be sure it is objectively correct.
30/05/2007 09:56:08	<b>Jane MacKenzie</b> (Jane (Moderator))	Tracey: that certainly will be interesting to track.
30/05/2007 09:56:10	<b>Tracey Winning</b> (TraceyWinning)	Self-assessment is a feature of many dental programmes. Malmo dental faculty have done some interesting work but within the programme
30/05/2007 09:57:07	<b>Jane MacKenzie</b> (Jane (Moderator))	Yes, there are various elements in our dental programme in Glasgow. Not sure anyone here's looked at the link between self-assessment and the reflective practitioner though



30/05/2007 09:57:33	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	My earlier post should have said : pjm: Re loss of face. F/b that leads to loss of face (=humiliation?) is risky. I see that as one of the big merits of computers, to set against all their drawbacks compared with teachers. Computers don't humiliate and th
30/05/2007 09:58:44	<b>David Nicol</b> (DavidNicol)	But there is element of subjectivity in level of confidence expressed? Have you analysed whether students differ in their subjective ratings overall or is that a silly idea?
30/05/2007 09:59:35	<b>Jane MacKenzie</b> (Jane (Moderator))	We're almost at the end of the scheduled session, are there any final questions?
30/05/2007 10:00:26	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	No not silly at all. We've done a lot of work assessing how well calibrated students are. They need practice to be well calibrated. Intrinsically over conf students are a hazard. Intrinsically diffident ones won't get on very fast. Both need to learn to i
30/05/2007 10:00:58	<b>Tracey Winning</b> (TraceyWinning)	any comments on how we might evaluate that we are having an impact
30/05/2007 10:01:12	<b>Wafa-Makky Nichols</b> (WNichols)	do you have a list of refs for this please!
30/05/2007 10:01:44	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	Refs about something specific?
30/05/2007 10:01:48	<b>Vanessa Scholes</b> (schvan)	Tracey - ask the students - and get them to put a certainty rating next to their answer? :-)
30/05/2007 10:02:04	<b>Wafa-Makky Nichols</b> (WNichols)	re We've done a lot of work assessing how well calibrated students are. They need practice to be well calibrated. Intrinsically over conf students are a hazard. Intrinsically diffident ones won't get on very fast. Both need to learn to improve their self-
30/05/2007 10:02:15	<b>Jane MacKenzie</b> (Jane (Moderator))	If there are references etc. you'd like to point to can I ask you to post them to the board.
30/05/2007 10:02:50	<b>Jane MacKenzie</b> (Jane (Moderator))	Tracey: I do think that the focus groups with different year groups is the way forward. Get the students to map their development?
30/05/2007 10:03:40	<b>Tony Gardner-Medwin</b> (TonyGardner-Medwin)	GM & Gahan 2003 has the main stuff, though some is in GM '95 and there is discussion in later work on the website about how to handle Ss who do show (usually minor) miscalibration.
30/05/2007 10:03:42	<b>Tracey Winning</b> (TraceyWinning)	we have student survey data, so focus gps would be good too but I was also thinking about actual performance - we used performance on assessing the peer videos but ? otehr ideas
30/05/2007 10:04:09	<b>Wafa-Makky Nichols</b> (WNichols)	Thanks
30/05/2007 10:04:38	<b>Jane MacKenzie</b> (Jane (Moderator))	In that case, I'd like to close this session by saying thank you to our facilitator and authors. I'd also like to encourage you to take the discussion over to the conference discussion board. So if anyone has a question that hasn't been addressed pleas

- TRANSCRIPT ENDS -



We apologise that owing to the limit on storage of individual messages within the chat software, particularly long messages have been truncated. Unfortunately, we are not able to recover these.

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