MA Effective Learning and Teaching

Investigating Research

Research Proposal

Rosalind Lord

Word Count: 3831

Rosalind Lord

Research Proposal

Students' perspectives of processes that lead to successful GCSE outcomes

Statement of research interest

Ample evidence exists indicating that students become effective learners when they are actively involved in their learning, using self-regulation strategies (Watkins et al., 2007, Watkins, 2010, Zimmerman, 2011). Such students set goals, plan, monitor their learning and react to feedback in a cyclical process that is strongly linked to motivational beliefs (ibid; Illeris, 2007). It is this intricate link with motivation however, that prevents self-regulation of learning from being 'taught' to students as a simple set of skills; without motivation students are unable to transfer such strategies to new tasks. Moreover, it is widely recognised that learning is a social process through which identity is constructed; the education system in England, with its accompanying assessment systems, affects intertwined notions of identity and achievement determining whether progress and motivation are maintained or suppressed (Torrance, 2007, 2012; Illeris, ibid; Pryor and Crossouard, 2008). Watkins (2010) strongly argues that all students can develop a learning orientation (becoming motivated, effective learners) if teachers create classroom environments where active learning, collaborative learning and learner-driven learning are the norm so that students can become skilled in thinking about learning processes (metalearning) and transfer strategies appropriately. In this way excellent exam results become 'a by-product of effective learning' (ibid: 12). My research project aims to gain a greater understanding of the relationship between effective learning and peak exam success in GCSEs (A*/A) from a student perspective. Are students who attain the highest grades motivated, self-regulating learners or are other factors at play?

It is well documented that the education system's high stake testing regime, of which GCSEs are a fundamental part, reproduces inequality by advantaging students from higher socioeconomic groups whose cultural capital enables them to access the curriculum more readily. This Bourdieu (1986: 48) describes as 'the best hidden and socially most determinant educational investment'. The coalition government claims that its education reforms will help combat inequality by giving greater autonomy to teachers to facilitate 'deep learning and intellectual exploration' (DfE, 2010: 40). Thus the government appears to find common ground with Watkins in recognising the need for students to develop into learners who 'select and use deep learning strategies' (Watkins, op cit: 4). Nonetheless, the pressure to perform well in GCSEs remains and this encourages 'teaching to the test', a classroom practice at odds with active learning. Sturman (2003: 271) however, explains that ''teaching

to the test' means different things to different teachers' and could be valid if it improves learning. Do exam year students value such teacher-led lessons? Much research has been done on the links between self-regulation of learning and academic achievement but this does not examine students' perspectives on exam preparation. The most recent paper to do this, a study in Ireland (Smyth and Banks, 2012), highlighted a shift in students' classroom preferences from active learning to exam-focused teaching methods as they entered their exam year. I cannot predict which themes will emerge from my small study but it might reveal a similar endorsement of exam support occurring in England. Torrance (2007: 289) argues that 'the provision of such detailed support raises issues of equity if it is not pursued uniformly'. My study could therefore be useful for future research on the relationship between high stakes tests and educational inequality maybe indicating ways in which the government's Pupil Premium (Cabinet Office, 2011), which aims to raise achievement of disadvantaged students, could be directed to provide specific exam support in Year 11.

Literature Review

I outline below four interrelating categories which emerge from a review of the literature, before examining in further detail three articles which exemplify the groupings. Firstly, students' ability to accurately monitor their learning is considered to be fundamental to theories and approaches to effective learning, specifically Watkins' focus on learning orientation (as opposed to performance orientation) and theories of self-regulation of learning. Monitoring learning, whether in task completion or when revising for exams, requires an ability to recognise a target standard against agreed criteria. Schunk and Usher (2011) explain that when faced with learning challenges and setbacks, self-regulating learners accept that it is their strategy rather than ability constraining their progress and will adjust their approach. Importantly, in order to maintain motivation students need to see evidence (via formative or summative assessment) that they are performing to the agreed standard, for this reinforces a belief that they are capable of learning. The research however, indicates that students are poor at making such judgements (Panadero et al., 2012; Schwinger and Stiensmeier-Pelster, 2012; Dunlosky & Rawson, 2012). These findings are crucial to my planned area of research for they suggest an inextricable link between learning orientation, performance and motivation. Successful GCSE outcomes at the highest grades are subject to judging performance against awarding bodies' criteria. Are successful, self-regulating learners making such judgements?

Secondly, closely connected to the theme of monitoring, the literature reveals that students' attitudes towards exams could affect their performance (Putwain, 2009; Brown, 2011; Smyth

and Banks, op cit; Crisp et al., 2008). Again, it demonstrates a strong relationship between attitudes, learning, performance and motivation.

A third concept to surface from the literature is differences in teachers' classroom practices in preparation for exams. The studies describe teachers focusing on exam techniques, revision of programmes of study and use of practice tests and indicate that familiarity with exam processes is important (Sturman, op cit; Crisp et al., ibid; Putwain, ibid). Significantly, the research demonstrates that exam practice could provide 'useful feedback on the students' knowledge, understanding and exam technique' (Putwain, ibid: 402). Thus such classroom practices could be considered to be an essential part of students' self-regulation of learning in assisting them to judge their performance against exam criteria. This raises issues of equality; some teachers are reluctant to engage in exam preparation (Putwain, ibid), their students therefore not benefitting from its positive aspects. Additionally, although not revealed in the literature, these types of exam preparation could influence students' approach to revision at home, a theme which might emerge in my project.

Finally, the literature exposes a more deliberate type of inequality: levels of additional support students receive outside of school (Ireson and Rushforth, 2011; Smyth and Banks, op cit). Smyth and Banks report almost half of the students in their study paying for private tuition in their final exam year and Ireson and Rushforth also highlight the fact that many students receive additional support from family members. Each practice, when used strategically to improve exam performance, 'inevitably places others at a disadvantage and serves to increase inequality' (Ireson and Rushforth, ibid: 18). In its *Toolkit of Strategies to Improve Learning* the Sutton Trust (2011), a charity whose objective is to improve educational outcomes for disadvantaged children, summarises research evidence related to classroom practices and interventions in order to help schools decide how to spend the Pupil Premium. They conclude that remedial tutoring can help students improve learning by five months, an effect size of 0.4 (ibid: 20). Although my focus shifts from remedial to exam-focused tutoring, my project may reveal such support to be significant to GCSE A*/A grade outcomes.

For a closer analysis I have chosen the articles of Dunlosky and Rawson, Crisp et al. and Smyth and Banks (op cit). Dunlosky and Rawson argue that although theories of self-regulation of learning assume that effective learners are competent at monitoring their learning little research exists to establish this link. Their study is the first to examine whether accurate monitoring influences learning retention. It investigates absolute accuracy in

judgements (students' overconfidence versus under confidence), the hypothesis being that overconfident students halt their learning too early and therefore do not retain information.

They conducted two experimental studies using computers. In the first study forty-eight undergraduate psychology students read a short passage adapted from an introductory psychology textbook to learn six key terms and their definitions. The students were randomly allocated into two groups: twenty-six as a control with the remaining twenty-two receiving monitoring prompts via the computer program to help them judge their accuracy. The study collected information on how the students rated their own learning accuracy. The hypothesis was confirmed as on testing two days later students who had received monitoring prompts performed better than the control group. Both groups however, were over-confident, the control group significantly more so.

Although the methodology is clearly explained two issues seem problematic. Firstly, students' accurate recall of key term definitions included verbatim answers which would not necessarily demonstrate that students had understood the concepts. Moreover, the reader is informed that recall scores were based on 'the proportion of idea units from the definition' the participants provided (p.274), suggesting that the program was only picking up key words and not accepting synonyms or other equally valid explanations. Secondly, although the authors place great emphasis on their study's focus on long-term retention rather than 'boosts in performance during or immediately after learning' (p.273), their decision to retest only two days later weakens their claims of representing 'long-term' retention. Furthermore, the research design's focus on undeveloped definitions seems to encourage short-term recall strategies rather than emphasising understanding for long-term retention.

The authors acknowledge a major concern with their findings, given that the standard deviation for judgement accuracy was large (25.0). However, in an attempt to compensate for any bias by conducting a second study with a larger group, 158 students, extra alterations were made: all 158 students received monitoring prompts but were no longer asked to rate their own judgements. The authors explain that this aimed to 'streamline' the session but it appears to have removed essential data for analysing whether students were accurately monitoring their learning. This therefore invalidates their claim of replicating the findings and renders the results inadequate for my project.

Returning to the first study, the 'overconfidence in judgements' results indicate that students are poor at monitoring their learning. This appears useful to my research. However, I am aware that the large standard deviation weakens the validity of the findings and the materials

used in the design are rather basic in comparison to the level of understanding students are expected to demonstrate at GCSE in order to attain A*/A grades. This closer analysis has made me realise that it would be inappropriate to cite this paper in my project when examining issues related to monitoring.

Crisp et al.'s (op cit) mixed method study investigated whether changing exam questions (style and wording) to meet students' expectations could reduce threats to construct validity. On the surface this aim appears to have little relation to my intended research. It is however the authors' assertion that 'there is an element of exam technique being tested when the real intention of exams is to test conceptual knowledge, understanding and subject-relevant skills' which is directly relevant to my project (p.112). Their findings could support the need for test preparation.

Crisp et al. explain that students have expectations about exam papers and establish schemas which are triggered by certain types of question. The methodology is outlined clearly: 339 Year 11 students of a representative range of abilities from four schools completed an experimental science test paper containing eight questions part adapted from previous GCSE papers. There were sixteen versions of the paper, containing a mix of expectation-meeting questions and questions that presented a mismatch. Rasch analysis was used to verify the fit of both types of questions. Semi-structured paired interviews of ten students followed immediately after the tests. The study revealed that students' expectations influenced understanding of questions at subject level (e.g. students do not expect a reading comprehension question in a science paper), question level (e.g. students placing too much emphasis on additional text or diagrams supplied) and sentence level (e.g. negatives are often overlooked even if in bold).

One issue arises however. Three of the four revised expectation-meeting questions resulted in improved mean scores, inconclusively expressed as being 'sometimes statistically significant' (p.95). Had the authors tested more questions this may have increased the validity of their findings. Nevertheless, this study provides useful evidence that there is an additional risk of a mismatch totally unrelated to students' learning: with one particular question the authors note that an 'alternative way of adapting this question [to meet expectations] would have been to change the mark scheme' (p.104). This demonstrates that unless specifically aware of the examiners' expectations subject knowledge may not be enough. Although the authors highlight arguments against the need for 'test-wiseness' this appears to provide evidence in support of it, corroborating other research that test preparation can help students to develop reasonable expectations (Putwain; Brown; Smyth

and Banks: op cit). It also indicates that students who are coached in exam preparation can become familiar with mark schemes and therefore have a test advantage.

The theme of inequality is further highlighted by Smyth and Banks (op cit). Little research exists on students' perspectives on teaching and learning in relation to high stake tests; Smyth and Banks' mixed method longitudinal study of students in the Republic of Ireland addresses this gap with the aim of exploring social class differences in experience and attitudes to teaching and learning practices over time. The methodology is clearly outlined: a postal survey sent to all secondary school principals had a 78% response rate. Results were analysed and twelve schools theoretically sampled on the basis of their intake criteria and approaches to ability grouping and subject options, factors considered to influence student experience of teaching and learning. Social class was based on occupational information received via questionnaire, these self-completion questionnaires having been given to all students in selected year groups. There were six waves of data collected from the same cohorts between 2002 and 2008, resulting in a total of 1645 completed questionnaires. Additionally, students in third and sixth years (Junior Certificate and Leaving Certificate years, both high stake tests) were randomly selected for group interviews, a total of 100 groups, each containing six students, and the transcripts analysed using QSR NVivo. There do not appear to be any issues with using this software as it simply helps researchers organise their data; it does not do the analysis. The sheer numbers involved in both the quantitative and qualitative aspects of the study provides rich data to explore students' attitudes to high stake tests.

The findings are that both middle class and working class students recognise that more time must be devoted to exam preparation but middle class students respond by studying more than working class, including more paying for extra tuition. This is demonstrated by analysis of the quantitative data. The study's analysis of qualitative data reveals that students shift in preference of teaching and learning styles over their school years from active learning to performance focused coaching (past papers, tests, and narrow exam-focused curriculum) in their exam years. This research appears to be directly relevant to my area of interest.

Two issues arise. Firstly, it is unclear whether preference for 'teaching to the test' (versus active learning) is representative of the sample group of sixth year students as the terms 'many' and 'certain groups of students' is used to describe the views of middle class students without clarifying whether this was a common perspective amongst the groups.

Secondly, the authors equate increased study time with improved learning:

> Social class variation is more evident in student *response* to the presence of high stake exams … with students from semi/unskilled manual backgrounds much less likely to increase the amount of time they spend on homework/study
>
> (p. 294, italics in original)

Many scholars argue that extra study time can only be beneficial if students have developed effective learning habits (Watkins; Panadero et al; Schwinger and Stiensmeier-Pelster; Brown: op cit). As learning outcomes are not a focus of the study the authors' assumption does not affect the validity of the findings but raises an important question in relation to my own study. Time is an issue of inequality (see Bourdieu, 1986). Is this study demonstrating that students from higher socioeconomic groups have in fact developed into effective learners and are making effective use of time or are they using their time instrumentally, paying for private tuition which is 'completely focused on exam preparation' (Smyth and Banks, op cit: 302)?

Research design and methodological decisions

The aim of my project is to discover the behaviours and processes considered to be important to high ability students in achieving exam success (A*/ A grades at GCSE). I wish also to examine Watkins' (op cit: 12) assertion that such success can be 'a by-product of effective learning'. To meet this aim I plan to use an abbreviated grounded theory approach, deviating from classic grounded theory in initial sampling (Charmaz, 2006; Cresswell, 2013; Dowling and Brown, 2010). Taking an experimental approach to initial sampling, I plan to interview a maximum of ten high ability students from Year 12 (male and female). The group should comprise of students who achieved A*/A in their GCSEs, including some who exceeded their teachers' predictions, and students who did not meet their A*/A predicted grades. The rationale for this sample is that the combination should offer a broad enough range to identify from interview whether or not students were motivated, self-regulated effective learners and whether this or other factors were significant to their exam results.

I will be conducting my research at a large, mixed secondary school with sixth form in West London. Having been granted permission for interview by the head teacher, I am currently in contact with the head of Year 12 who will liaise with teachers to select the students for me. This school has an outstanding Ofsted report in all categories. Of particular relevance to my study is the fact that for teaching and learning Ofsted judge that:

> … effective support is given to all students via differentiation, assessment for learning [AfL] strategies and effective behaviour management. These strategies are clearly evidenced in all schemes of work. Departmental meetings are used to discuss individual students so that timely intervention can be provided.

I am therefore hypothesising that because teachers employ Assessment for Learning (AfL) practices in the classroom, which Drummond (2003, cited in Marshall and Drummond, 2006) defines as 'the ways in which, in our everyday practice, we observe children's learning, strive to understand it and then put our understanding to good use', they should be familiar with the learning behaviours of their students. By holding brief interviews with the teachers concerned I anticipate that they will be able to identify students in the sample who they believe to be the most effective learners and explain the basis on which predicted GCSE grades were made, whether on previous exam performance or learning orientation.

After initial sampling, the data collection and analysis will follow the principles of classic grounded theory: an open-ended interview format with open coding, use of memos and selective coding, eschewing Strauss and Corbin's axial coding as unnecessary (Charmaz, op cit). In accordance with Glaser's (1992) account of grounded theory's goal of finding, conceptualising and confirming the issues that are of main concern to the participants I will start the interviews with a 'grand tour' question and will ask for clarifications, greater detail and explanations where appropriate. Although I recognise that a grounded theory approach should not use a structured interview schedule I have also prepared a short list of questions (attached) based on Charmaz's (op cit: 30-31) framework. These are intended to provide me reassurance as a beginner researcher but will not be used if the initial question generates the types of responses from which short prompts (such as, 'Can you tell me more about X?') can produce further rich data. The interview period unfortunately takes place immediately after AS exams, in early June. I will therefore need to be very careful in guiding students to distinguish between thoughts about GCSE revision and those which may relate to their AS revision.

I will interview the students individually and record and transcribe the recordings myself. Each interview should take approximately 30 minutes. Charmaz (op cit) reminds researchers that participants may not always give correct accounts, preferring to give idealised versions of themselves. I realise that I will have to repeat assurances about anonymity and emphasise the purpose of the research (expressed simply as 'to examine issues that students consider to be important to their exam preparation'), in the hope that the students will feel able to talk freely. I will remain aware of the need to create a rapport with them. I am genuinely interested in capturing the 'student voice' and will do my utmost to validate their perspective and make them feel that their participation is appreciated (Charmaz, op cit). Nevertheless, I am aware that some students may wish to opt out of the project and will therefore discuss this risk with the head of Year 12 at our first meeting. A minimum of eight students would still be acceptable.

Issues

As I analyse the data and refine categories in my emerging theory I wish to establish whether or not socioeconomic class is significant. I am reluctant to use the free school meals register as an indicator of social class, 'a common, but very crude, proxy for family poverty' (Gillborn, 2008: 53). I would prefer to establish, via a brief questionnaire for parents of the student sample, a more accurate description, maybe referring to the ONS (2013) *National Statistics Socio-economic Classification*, but will first need to seek advice from my supervisor. I would also like to use the questionnaire to obtain information about parents' educational background (the type of school attended and highest level of study) in order to assist further analysis should a category of 'additional support' emerge from initial coding. If these prove to be viable options I would also need to discuss them with the head of Year 12 and gain approval from the head teacher.

Finally, ethical considerations are central to the success of the project. Having consulted the BERA (2011) guidance on ethical research, I have prepared information sheets about the project and consent forms will be issued to students (the head teacher has already seen the copies attached). I wish to avoid possible embarrassment or discomfort amongst students and therefore will need to pay particular attention to the student sample whose GCSE outcomes fell below their predicted grades. All the students selected, including this last group, will have been successful in meeting the entry requirements to start their Year 12 course. In this sense all have had successes in their GCSE exams and this will be emphasised. None of the questions I will ask will allude to negative judgments about GCSE performance.

Conclusion

I believe this study to be important as it addresses a gap in the literature, hopefully providing a theory that adequately explains the processes that support students in achieving the highest grades at GCSE. These processes should prove to have been essential to some of this small group but overlooked by others. It would be left for future researchers to test or verify the theory. I would be very much interested in being part of such a project.

Word count: 3,831

References

BERA (2011) *Ethical Guidelines for Educational Research*. Available at: http://content.yudu.com/Library/A1t9gr/BERAEthicalGuideline/resources/index.htm?referrerUrl=http%25253A%25252F%25252Fwww.yudu.com%25252Fitem%25252Fdetails%25252F375952%25252FBERA-Ethical-Guidelines-2011 [Accessed 20 April 2013]

Bourdieu, P. (1986) The Forms of Capital. In Richardson, J. G. (Ed.) *Handbook of Theory and Research for the Sociology of Education*. London and New York: Greenwood Press.

Brown, G. T. L. (2011) Self-regulation of assessment beliefs and attitudes: A review of the Students' Conceptions of Assessment inventory. *Educational Psychology, 31*(6), 731-748.

Cabinet Office (2011) *Opening Doors, Breaking Barriers: A Strategy for Social Mobility.* Available at http://www.dpm.cabinetoffice.gov.uk/sites/default/files_dpm/resources/opening-doors-breaking-barriers.pdf [Accessed 05 April 2013]

Charmaz, K. (2006) *Constructing Grounded Theory: A practical Guide Through Qualitative Analysis*. London: Sage.

Creswell, J. (2013) *Qualitative Inquiry and Research Design: choosing among five approaches*. 3rd ed. Thousand Oaks: Sage.

Crisp, V. Sweiry, E., Ahmed, A., and Pollitt, A. (2008) Tales of the expected: the influence of students' expectations on question validity and implications for writing exam questions. *Educational Research, 50*(1), 95-115.

DfE (2010) *The Importance of Teaching: Schools*, White Paper. Available at: http://www.education.gov.uk/schools/toolsandinitiatives/schoolswhitepaper/b0068570/the-importance-of-teaching/sos-foreword [Accessed 05 April 2013]

Dowling, P.C. and Brown, A.J. (2010) *Doing Research/Reading Research: Re-interrogating Education*. 2nd ed. London: Routledge.

Dunlosky, J. and Rawson, K. A. (2012) Overconfidence produces underachievement: Inaccurate self evaluations undermine students' learning and retention. *Learning and Instruction, 22*(4), 271-280.

Gillborn, D. (2008) *Racism and Education: Coincidence or Conspiracy?* London: Routledge.

Glaser, B. G. (1992). *Basics of Grounded Theory Analysis: Emergence vs Forcing*. Mill Valley: Sociology Press.

Illeris, K. (2007) *How we learn: learning and non-learning in school and beyond.* Abingdon: Routledge.

Ireson, J., and Rushforth, K. (2011) Private tutoring at transition points in the English education system: its nature, extent and purpose. *Research Papers in Education, 26*(1), 1-19.

Marshall, B. and Drummond, M. Jane. (2006) How Teachers Engage with AfL: Lessons from the Classroom. *Research Papers in Education* 21 (2): 133-149.

Ofsted (2008) *Find an Inspection Report* Available at: http://www.ofsted.gov.uk/inspection-reports [Accessed 24 May 2013]

ONS (2013) *The National Statistics Socio-economic Classification (NS-SEC rebased on the SOC2010)* Available at: http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/soc2010/soc2010-volume-3-ns-sec--rebased-on-soc2010--user-manual/index.html [Accessed 28 May 2013]

Panadero, E., Tapia, J. A. and Huertas, J. A. (2012). Rubrics and self-assessment scripts effects on self-regulation, learning and self-efficacy in secondary education. *Learning and Individual Differences, 22*(6), 806-813.

Pryor, J., and Crossouard, B. (2008) A socio-cultural theorisation of formative assessment. *Oxford Review of Education*, 34(1) 1–20.

Putwain, D. W. (2009) Assessment and examination stress in Key Stage 4. *British Educational Research Journal, 35*(3), 391-411.

Schunk, D.H. and Usher, E.L. (2011) Assessing Self-Efficacy for Self-Regulated Learning. In Zimmerman, B.J. and Schunk, D.H. (eds) (2011) *Handbook of Self-Regulation of Learning and Performance*. New York and Abingdon: Routledge.

Schwinger, M., and Stiensmeier-Pelster, J. (2012). Effects of motivational regulation on effort and achievement: A mediation model. *International Journal of Educational Research, 56*, 35-47.

Smyth, E. and Banks, J. (2012) High stakes testing and student perspectives on teaching and learning in the Republic of Ireland. *Educational Assessment, Evaluation and Accountability, 24*(4), 283-306.

Sturman, L. (2003) Teaching to the test: science or intuition? *Educational Research*, 45(3), 261-273

Sutton Trust (2011) *Toolkit of Strategies to Improve Learning*. Available at: http://www.cem.org/attachments/1toolkit-summary-final-r-2-.pdf [Accessed 09 May 2013]

Torrance, H. (2007) Assessment *as* Learning? How the Use of Explicit Learning Objectives, Assessment Criteria and Feedback in Post-Secondary Education and Training can come to Dominate Learning. *Assessment in Education* 14 (3) 281-294

Torrance, H. (2012) Formative Assessment at the Crossroads: Conformative, Deformative and Transformative Assessment. *Oxford Review of Education,* 38 (3): 323-342

Watkins, C., Carnell, E. and Lodge, C. (2007) *Effective Learning in Classrooms.* London: Paul Chapman Publishing.

Watkins, C. (2010) Learning, Performance and Improvement. *INSI Research Matters, 43*, 1-15.

Zimmerman , B.J. (2011) Motivational Sources and Outcomes of Self-Regulated Learning and Performance. In Zimmerman, B.J. and Schunk, D.H. (eds) (2011) *Handbook of Self-Regulation of Learning and Performance*. New York and Abingdon: Routledge.