



Maclellan, Effie Academic Achievement: the role of praise in motivating students. *Active Learning in Higher Education*, 6 (3). pp. 194-206. ISSN 1469-7874

<http://strathprints.strath.ac.uk/7324/>

This is an author-produced version of a paper published in *Active Learning in Higher Education*, 6 (3). pp. 194-206. ISSN 1469-7874. This version has been peer-reviewed, but does not include the final publisher proof corrections, published layout, or pagination.

Strathprints is designed to allow users to access the research output of the University of Strathclyde. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. You may not engage in further distribution of the material for any profitmaking activities or any commercial gain. You may freely distribute both the url (<http://eprints.cdlr.strath.ac.uk>) and the content of this paper for research or study, educational, or not-for-profit purposes without prior permission or charge. You may freely distribute the url (<http://eprints.cdlr.strath.ac.uk>) of the Strathprints website.

Any correspondence concerning this service should be sent to The Strathprints Administrator: eprints@cis.strath.ac.uk

Context

It is not surprising that the motivation of students is an important topic (Biggs, 1999; Knight & Trowler, 2001; Knight 2002; Prosser & Trigwell, 1999) given the claims for its power to influence academic achievement (Brophy, 1999; Graham & Weiner, 1996; Hattie, 2003; Pajares, 2001). In the current context of increasing access to higher education, some students may have little in the way of formal entry qualifications, while others may have varying conceptions of what learning might mean (Dart, 1997; Eaton & Dembo, 1997; Purdie et al, 1996; Schuller et al, 1999). Within such diversity, we cannot assume that all students are either well prepared for the particular demands of higher education or that they are necessarily going to learn or perform according to traditional academic mores. It therefore becomes important to understand, for example, why some students complete tasks despite enormous difficulty while others give up at the slightest provocation or why some students set such unrealistically high goals for themselves that failure is an inevitable consequence. The resolution of those issues and others like them has its knowledge base in the literature on Motivation, which is commonly understood as the study of why people think and behave as they do.

In contemporary social-cognitive models of motivation (Pintrich & Schunk, 2002), motivation is assumed to be both dynamic and context sensitive. No longer is motivation some (quantifiable) characteristic between the endpoints of 'motivated' and 'not motivated' but rather is multifaceted. However, not only can students be motivated in multiple ways but these motivations are inherently changeable and domain specific, rather than being stable, personal traits. A further assumption is that students' motivation, learning and achievement are mediated by their self-regulatory activities. Taken together these assumptions have two corollaries. One is that it is a misconception that some students are motivated but others are not. Whilst there may be students who are not motivated to behave in the way that tutors would like them to behave, by definition, students are motivated when they choose goals and expend effort to achieve them (Wolters, 1998). The other is that it is a misconception that one person can directly motivate another. Motivation is a subjective experience (Brophy, 1999) for which there is no guaranteed equivalence between self reports of the experience and behaviours that allegedly evidence the experience (Elliot & Hufton, 2003). That academic motivation is neither a unitary or static attribute which students either do or do not 'have' but is actively shaped by their perceptions of control over the learning environment, their metacognitive processes, their perceptions of ability and their beliefs about the utility of effort (Leo & Galloway, 1996; Prosser & Trigwell, 1999), means that understanding whether students are eager or disinclined to learn, whether they embrace or shy away from challenge and whether they persevere or give up in the face of a difficult task defies simple and straightforward explanation. While the sheer plethora of motivational constructs that have emerged in social-cognitive models may well be theoretically important to the psychologist, they may be confusing and less than helpful in developing applications to improve academic achievement. The need for tutors to be able to harness their understandings into practices that relate motivation to achievement, is a perfectly reasonable one and is one which this article attempts to satisfy. Notwithstanding the importance of self efficacy (Bandura, 1997), intrinsic motivation/interest (Krapp, 2003), attributions (Weiner, 1986) and a myriad of other explanatory variables posited for motivation, this article will focus on the importance of praise, since it is an application that is within the control of the tutor, at least to some extent. Furthermore, given that it is what teachers know, do and care about (Hattie, 2003) that can be so powerful in academic achievement, it would seem important to be clear about the power of praise.

What is wrong with praising people?

Because both common sense and the literature tells us that feelings of helplessness and contingent self-worth can be debilitating if not downright damaging, we have come to believe that praising people is essentially 'good' and may also connote the complimentary belief that criticism is unhelpful and makes people more vulnerable. Given the evidence for the use of praise (Koestner et al, 1987, 1989; Schunk, 1994) and for the phenomenon of learned helplessness (Dweck, 1975; Dweck & Reppucci, 1973; Seligman

et al, 1995), it is not surprising that tutors believe that giving praise maybe necessary for academic achievement (Mueller & Dweck, 1998). The extensive literature in behavioural psychology on the use of praise to shape desirable/appropriate behaviour largely describes success-only procedures and eliminates the experience of error for the student. The documented procedures are premised on the view that the experience of errors renders the context/materials/event aversive and elicits negative emotions on the part of the student. Although there is ample evidence that errors per se do indeed have adverse effects on the performance of some students, and that success motivates them, there is also evidence that ‘positive reinforcement’ may actually result in students avoiding intellectual tasks or not persisting in the face of difficulties (Ames & Ames, 1984; Deci & Ryan, 1985; Dweck, 2000). Further, extrinsic reward systems are associated with a decline in interest or liking of academic work, a marked anxiety about cognitive outcomes and a perception of self as being externally rather than internally controlled (Ryan et al, 1985). The issue thus turns on whether the most effective way of overcoming helpless or negative reactions to failure is to eliminate failure from the students’ experience or to teach students how to deal with it since simplistic attempts to empower students can result in their fearing failure, avoiding risks, and coping badly with setbacks (Kamins & Dweck, 1999; Mueller & Dweck, 1998). Moreover, the literature on the psychological construct of resilience (such as Howard et al, 1999; Howard & Johnson, 2000; Luthar et al, 2000; Masten, 2001) suggests that students learn to deal effectively with academic setbacks, stress and study pressure from receiving specific help with the particular *learning* difficulties that they are experiencing, rather than from social and emotional support/comfort. In other words the errors that give rise to academic setbacks, stress and study pressure should not be viewed as pathological symptoms from which students have to be shielded but as the focus for subsequent academic improvement and achievement. This then suggests that while our common sense views about praise leading to academic achievement are intuitively appealing, they are not altogether helpful to the tutor who needs a much finer-grained understanding of how to help students to embrace learning and to be resilient in the face of obstacles/challenge.

Praise in a social-cognitive perspective

The social-cognitive perspective on motivation includes general approaches to, and evaluations of, engagement in tasks in academic learning contexts, otherwise known as goal orientations. Although these psychological dispositions towards achieving one’s objectives have been described using a variety of constructs, each carrying different nuances of meaning, Pintrich (2003) summarises the evidence in terms of the goal (mastery or performance) and the focus (approach or avoidance) that students might have in mind, to yield 4 different goal orientations: mastery-approach, mastery-avoidance, performance-approach, performance-avoidance as indicated in Table 1.

This schematic prototype should not be taken to mean that there is comprehensive and incontrovertible evidence for each of the cells. Indeed Pintrich (2003) makes clear that the mastery-approach orientation is the one for which there is most evidence. Notwithstanding the debates that attend the veracity of the approach-avoidance focus or the doubts about the superiority of mastery goals, most of the literature acknowledges the contribution of Dweck and her colleagues on ability-outcome linkages in which alternative views of ability ‘explain’ academic achievement. Within a social-cognitive perspective, therefore, praise cannot be understood as a stand-alone application to be enacted solely through a set of procedures but has to recognise that the effects of praise are mediated by students’ goal orientations, which of themselves may be either additive or interactive composites of different objectives and different contexts (Kaplan & Midgley, 1997; Miller et al, 1993; Stipek & Gralinski, 1996).

Table 1

	Approach Focus	Avoidance Focus
Mastery Goal(s)	mastering the task, learning or understanding	avoiding misunderstanding, not learning or not mastering the task
	gauged against standards of self-improvement progress	gauged against being correct in relation to task
Performance Goal(s)	being superior, smart or 'the best'	avoiding inferiority or appearing stupid
	gauged against normative standards of getting highest grades or giving the best performance	gauged against normative standards of not getting worst grades or giving the poorest performance

(Adapted from Pintrich, 2003)

Different views of ability and their implications

Briefly, Dweck (2000) reports two views of ability: one as the fixed entity theory of intelligence which assumes that intelligence is unevenly distributed throughout the population and is fixed and finite; and the other as the incremental theory of intelligence which assumes that ability is an ever increasing repertoire of skills and knowledge effected through one's instrumental behaviour. These different theories of ability have ramifications for both how students (and tutors) behave. Students with a fixed, entity theory of ability value intelligence (perhaps because it is a socially esteemed commodity) but believe it ultimately limits achievement. The contradiction in this belief (of valuing that which they themselves allegedly may not amply possess) results in their desire to avoid taking risks, refrain from accepting challenges and conceal their ignorance because they believe that to do any of these and fail is to make very public one's lack of intelligence. Rather, students with a fixed, entity theory of ability choose 'safe', selected tasks at which they will succeed (because there is no risk of failure). These students are thus concerned to demonstrate how smart or bright or clever they *appear* to be, through exemplary performance whilst possibly sacrificing valuable learning opportunities because they never really find out if they could do more. The significance of flawless performance is in the perception that the performance is a direct reflection of intelligence. Because less than exemplary performance is deemed to reflect poor intellect (without any regard for the nature of the task, the individual's inclination to attend to the task or whether the level of performance was typical/atypical), any academic setbacks are viewed very negatively, as decisive judgements about the person(s). These views are further corroborated in the fixed, entity view of intelligence that effort is unnecessary (because if you're smart, or clever, or brainy you shouldn't have to work hard) and/or ineffective (because hard work does not compensate for low ability).

This view of intelligence as a fixed entity is not without cost, however. Because of the importance of flawless performance and the need to avoid tasks when this cannot be assured, students handicap themselves through leaving tasks till the last minute, through finding displacement activity, or through withdrawing from the task. Such self-defeating behaviour has the cumulative effect of lower levels of achievement than might have obtained had students accepted, and engaged in, the challenges offered.

The alternative view of ability, as malleable and incremental, also values intelligence but sees it as a potential to be developed. Students with this view give primacy to learning (rather than to performance) even if there is a risk of making errors. These students do not perceive failure as either a personal judgement or a negative statement about people but rather as an indication of insufficient effort or inappropriate strategy choice. The recognition that errors are an inevitable part of learning which can lead to strategy diagnosis and remediation can allow students to make progress because they are not shackled

with the worrying doubt of whether they have or do not have enough ability. Since ability can always be improved, through the power of effort, task difficulty is not viewed as an insurmountable obstacle but rather as an opportunity for increased and improved learning.

Such a view of intelligence, unlike the previous view, means that students need not be concerned with face-saving, self-defeating strategies and since they are willing to expend effort (because they see effort as the necessary mechanism through which learning actually happens, and setbacks as the opportunities for further learning) their achievements can outperform those of students with a fixed view of intelligence.

From the account given here it is rational to conclude that a malleable, incremental view is more conducive to promoting academic achievement and that the alternative, a fixed entity view of ability binds its proponents into unhelpful motivational patterns of behaviour. However, the complexity of psychological functioning does not necessarily mean that what is rational is what really informs our beliefs and behaviour. While young learners hold unrealistically high ability beliefs (Nicholls, 1979) in that they neither modify their beliefs following failure (Parsons & Ruble, 1977) nor consider their performance in relation to that of their peers (Ruble et al, 1976), older learners become more realistic about their ability beliefs as they draw on the evaluations of self, peers, tutors and parents (Nicholls, 1978, 1979; Rosenholtz & Rosenholtz, 1981). It would seem that in the course of development people learn to subscribe to the fixed entity view of intelligence, even although this is a limiting and debilitating view. In other words, in the process of moving towards the normative conception of difficulty, concerns with the performance of others lead students to become increasingly concerned with the reasons for, and presentation of, their own performance relative to that of others. While students' views of intelligence may remain stable if 'uncontaminated' by other influences, they are susceptible to intervention (Robins & Pals, 2002). One type of intervention documented to effect some change in viewpoint is the type of feedback (praise or criticism) given to students (Dweck, 2003).

What Dweck and her colleagues found

In a series of studies (such as Kamins & Dweck, 1999; Mueller & Dweck, 1998; Robins & Pals, 2002) students experienced different forms of praise and criticism for their achievements. Summarising and extrapolating from the various studies, the following can be reported.

1. There are differences between the effects of person praise and process praise. In person praise the students are told that they are good or smart or wonderful. In other words the praise is directed at the students globally as when told, "You're a good student", "I'm very proud of you" or "You're very good at this". In process praise, the feedback is directed at the effort or strategy used by the students as when told, "You tried really hard" or "You found a good way to do this. Can you think of other ways that would also work?"
2. There are differences between the effects of person-oriented criticism and strategy, or process, criticism. As for person praise, person-oriented criticism expresses a global evaluation of the student's performance as when told "I'm very disappointed in you" or "You didn't do that very well" after some task has been incompletely carried out. In process criticism, like process praise, students' attention is drawn to the specifics of what is incomplete about the task as in, "This piece of work has no conclusion and the references are inconsistent" but this is immediately followed up with, "Maybe you could consult the library help sheets to find the *different* ways of referencing and come to a clear decision about which one you are using and why". So this form of criticism contains two essential features: drawing attention to the error/mistake and asking the student to think of an alternative solution strategy.
3. Students who experience person-oriented criticism give significantly lower ratings than did those who experience process criticism to the *quality* of their products, the *satisfaction* with their performance in making the product, how *capable* they consider themselves to be in making the

product and their *willingness* to resolve setbacks.

4. The authors draw a number of conclusions from the findings:

- having received person criticism in the past increases the likelihood that current mistakes are seen as failures whilst having received process criticism leaves the individual able to generate constructive solutions to errors;
- not only does person criticism encourage one to view one's performance less positively but such criticism negatively influences self-perceptions, causing feelings of being 'not good', 'not smart', 'not nice';
- the type of criticism experienced influences not only one's affect and self-perception but also influences subsequent behaviour in terms of persisting with or desisting from the setback.

5. The findings on the effects of praise mirror those from the studies on the effects of criticism leading the authors to conclude:

- students experiencing person praise when they succeed are the ones least likely to attribute their achievement to low effort so person praise teaches students to make inferences about their ability from their performance whilst process praise seems not to trigger this inference;
- person praise does not appear to lead to obvious motivational deficits immediately after a successful and well-received task performance but it would appear to leave students extremely vulnerable to subsequent setbacks;
- in response to setbacks, person praise encourages students to find out how their performance compares with that of others while process praise encourages students to seek information/problem-solving strategies on how to remedy failure;
- students experiencing person praise appear to overstate their actual achievements when reporting their performance to peers whilst those experiencing process praise do not require to artificially inflate reports of their achievements.

In other words, person praise generates in students a fixed view of intelligence, whilst process praise generates a malleable view of intelligence (with all the connotations that each of the views carry). It is perhaps worth noting that the studies had included a third type of praise/criticism: that of outcome praise or outcome criticism. This type of praise targeted the behaviour and was included because of the folklore which advocates that one should focus on the behaviour to depersonalise critical feedback. However being told that one's behaviour was on or off the mark, yielded ratings that fell between person and process. This suggests that while outcome feedback may be preferable to person feedback it is not as effective as process feedback. These findings caution us against over simplistic interpretations of the use of praise and criticism because they give the lie to the belief that you can help students to be resilient and withstand difficulty through indiscriminate use of praise and through protecting them from exposure to criticism. Rather, what the evidence suggests is that if praise and criticism are in terms of task analysis, strategy formulation and challenging, ipsative standards instead of global, whole-person evaluations, then it will serve to motivate further endeavour. Person-oriented praise, however, while positively and enjoyably experienced by recipients in the immediacy of the successfully completed task, leaves students vulnerable in the face of subsequent difficulty because they interpret such praise to be deep-seated, intractable and all important. Person-oriented praise is therefore a very fragile motivator because its frequent use will encourage students to protect positive feedback by avoiding challenging tasks, thereby orienting them to performance goals.

Implications for tutors' practices

These complex but subtle differences between different types of praise and criticism tell a consistent story. Feedback that centres students as people confirms a belief in fixed intelligence with all of its vulnerabilities while feedback that focuses students on effort, challenge or strategy promotes a belief in malleable intelligence with all of its benefits. This implies that some tutor/classroom practices may be helpful and others unhelpful.

- The dynamic, situationally determined nature of motivation means that there can be no guaranteed prescriptions for giving effective feedback. The attention that students pay to feedback, the sense they make of it and the relevance/appropriateness of the feedback for subsequent learning can only be understood in the context of the specific problems and specific students.
- In the social-cognitive perspective, motivation is understood as being within the student's own self-management of learning as well as being within the influence of tutors. Thus in situations where the material is regarded as boring but important to learn, as interesting but unimportant to learn or as difficult/effortful to learn, motivation to persist is clearly a complex phenomenon requiring detailed definition of the possible motivational processes involved.
- While a malleable view of intelligence is preferable, it should not be assumed that students who are achieving academically will continue to do so in the absence of feedback. Without appropriate feedback to promote increasing academic autonomy, students may well get stuck in, or even slide from, existing learning trajectories.
- When praise is given, it is most helpful when it is process praise. Praise for low-challenge, low-effort, error-free success tells students that they are praiseworthy only when they carry out tasks quickly, easily and perfectly. This does not enable students to embrace learning and challenge. Indeed Dweck goes so far as to advise that the tutor might apologise to a student – "sorry I wasted your time with a task that is too simple for you" - when tasks have underestimated the challenge level.
- Students need to learn to tolerate ambiguity and confusion as integral stages in learning so the tutor can helpfully model how to confront difficulty – "well that strategy didn't work", "what can we try now?" "that tells us we used the wrong strategy". Such feedback makes clear that both tutor and student use mistakes as the platform from which to launch an alternative strategy.
- Process praise is helpful following success (to indicate that success can be repeated) and failure (to overcome mistakes). But praise following mistakes and errors has to be carefully delivered. If the praise is of the variety, "Well done, you did your best" the message conveyed is one of pity, thereby confirming to the student that the mistakes were due to fixed ability and unavoidable, and not the responsibility of the student. Equally, it is not helpful merely to tell students to try harder because this conveys no information about how effort might be expended, and is tantamount to person praise. This in turn implies that the process praise is demanding of the tutor: both to steer students towards the malleable intelligence view and to enable students to develop the strategies which will support them.
- The importance of strategy choice and effort on the part of students can be effectively communicated to students by careful tutor judgement of how much help to give in the enactment of class tasks and learning activities. While this is not to suggest that the tutor should desist completely from providing help, it has to be recognised that the non-judicious provision of tutor help, particularly if unsolicited by students, can imply that student difficulty is due to low, fixed ability. On the other hand, by requiring students to engage in the task, and make their own sense of it, they are learning that sufficient effort might be needed from them. This then suggests that as

tutors we be clear about what we are meaning and doing when engaging in such ubiquitous but ill defined tutor tasks of 'monitoring', 'helping' or 'providing support'.

Conclusion

For tutors in higher education the motivation of students is an extremely important issue. No sane educator would deny this assertion. However, there is room for debate about how to effect motivation that drives high quality learning and achievement. The social-cognitive perspective characterises motivation as dynamic, contextually sensitive and personally variable. Thus the historical and prevalent belief that motivation is achieved and allegedly enhanced by the excessive and indiscriminate use of praise is an incomplete account of how feedback might be used to promote academic achievement. Essentially, motivation is a complex construct which is regulated by students as well as being influenced by tutors. Within such strictures, tutors may be able to influence students' motivations through the feedback they offer. Such feedback can take the form of praise or criticism but the evidence suggests that the value of either is within quite specific limitations.

References

- Ames, R. & Ames, C. (1984) *Research on Motivation in Education*, Orlando FL: Academic Press.
- Ames, C. & Archer, J. (1988) Achievement goals in the classroom: students' learning strategies and motivation processes. *Journal of Educational Psychology*, 80(3): 260-7.
- Bandura, A. (1997) *Self Efficacy: the exercise of control*, New York: Freeman.
- Biggs, J. (1999) *Teaching for Quality Learning*, Buckingham: The Society for Research into Higher Education & Open University Press.
- Brophy, J. (1999) Toward a model of the value aspects of motivation in education. *Educational Psychologist*, 34 (2): 75-85.
- Dart, B. (1997) 'Adult Learners' Metacognitive Behaviour in Higher Education', in P. Sutherland (ed.) *Adult Learning*, pp 30-43, London: Kogan Page.
- Deci, E. & Ryan, R. (1985) *Intrinsic Motivation and Self-Determination in Human Behaviour*, New York: Plenum Press.
- Dweck, C. (1975) The role of expectations and attributions in the alleviation of learned helplessness, *Journal of Personality and Social Psychology*, 31: 674-85.
- Dweck, C. (2000) *Self-Theories*, London: Psychology Press.
- Dweck, C. (2003) Ability conceptions, motivation and development, *Development and Motivation*, 13-27, BJEP Monograph Series II, 2.
- Dweck, C. & Reppucci, N. (1973) Learned helplessness and reinforcement responsibility in children, *Journal of Personality and Social Psychology*, 25: 109-16.
- Eaton, M. & Dembo, M. (1997) Differences in motivational beliefs of Asian American and non-Asian students, *Journal of Educational Psychology*, 89 (3): 433-440.
- Elliot, J. & Hufton, N. (2003) Achievement motivation in real contexts. *Development and Motivation*, 2: 155-172.
- Graham, S. & Weiner, B. (1996) Theories and principles of motivation, in D. Berliner & R. Calfee (eds)

Handbook of Educational Psychology, pp. 63-84, New York: Macmillan

Hattie, J. (2003) Teachers Make a Difference: What does the research tell us? Australian Council for Educational Research Conference, 19th-21st October, Melbourne.

Howard, S., Dryden, J. & Johnson, B. (1999) Childhood resilience: review and critique of the literature. *Oxford Review of Education*, 25 (3): 307-323.

Howard, S. & Johnson, B. (2000) What makes the difference? *Educational Studies*, 26 (3): 321-337.

Kamins, M. & Dweck, C. (1999) Person versus process praise and criticism: implications for contingent self-worth and coping, *Developmental Psychology*, 35(3): 835-47.

Kaplan, A. & Midgley, C. (1997) The effect of achievement goals, *Contemporary Educational Psychology*, 22: 415-35

Knight, P. & Trowler, P. (2001) *Departmental Leadership in Higher Education*, Buckingham: The Society for Research into Higher Education & Open University Press.

Knight, P. (2002 Buckingham) *Being a Teacher in Higher Education*, The Society for Research into Higher Education & Open University Press.

Koestner, R., Zuckerman, M. & Koestner, J. (1987) Praise, involvement and intrinsic motivation, *Journal of Personality and Social Psychology*, 53: 383-90.

Koestner, R., Zuckerman, M. & Koestner, J. (1989) Attributional focus of praise and children's intrinsic motivation: the moderating role of gender, *Personality and Social Psychology Bulletin*, 15: 61-72.

Krapp, A. (2003) Interest and human development: an educational-psychological perspective. *Development and Motivation*, 2: 57-84.

Leo, E. & Galloway, D. (1996) Evaluating research on motivation. *Evaluation and Research in Education*, 10(1): 35-47.

Luthar, S., Cicchetti, D. & Becker, B. (2000) The construct of resilience: a critical evaluation and guidelines for future work. *Child Development*, 71 (3): 543-562.

Masten, A. (2001) Ordinary magic. *American Psychologist*, 56 (3): 227-238.

Miller, R., Behrens, J., Green, B. & Newman, D. (1993) Goals and perceived ability, *Contemporary Educational Psychology*, 18: 2-14.

Mueller, C. & Dweck, C. (1998) Praise for intelligence can undermine motivation and performance. *Journal of Personality and Social Psychology*, 75: 33-52.

Nicholls, J. (1978) The development of the concepts of effort and ability, perceptions of academic achievement, and the understanding that difficult tasks require more ability, *Child Development*, 49: 800-14.

Nicholls, J. (1979) Development of perception of own attainment and causal attributions for success and failure in reading, *Journal of Educational Psychology*, 71: 94-99.

Pajares, F. (2001) Toward a positive psychology of academic motivation. *Journal of Educational Research*, 95 (1): 27-35.

Parsons, J. & Ruble, D. (1977) The development of achievement-related expectancies, *Child Development*,

48: 1075-79.

Pintrich, P. & Schunk, D. (2002) *Motivation in Education*, New Jersey: Prentice-Hall Merrill

Pintrich, P. (2003) Multiple goals and multiple pathways in the development of motivation and self-regulated learning. *Development and Motivation*, 2: 137-153.

Prosser, M. & Trigwell, K. (1999) *Understanding Teaching and Learning*, Buckingham: The Society for Research into Higher Education & Open University Press.

Purdie, N., Hattie, J. & Douglas, G. (1996) Student conceptions of learning and their use of self-regulated learning strategies, *Journal of Educational Psychology*, 88 (1) 87-100.

Robins, R. & Pals, J. (2002) Implicit self-theories of ability in the academic domain: a test of Dweck's model, *Self and Identity*, 1: 313-336

Rosenholtz, S. & Rosenholtz, S. (1981) Classroom organisation and the perception of ability, *Sociology of Education*, 54: 132-140.

Ruble, D., Parsons, J. & Ross, J. (1976) Self-evaluative responses of children in an achievement setting, *Child Development*, 47: 990-97.

Ryan, R., Connell, J. & Deci, E. (1985) 'A motivational analysis of self-determination and self-regulation', in: C. Ames & R. Ames (Eds) *Research on Motivation in Education*, Volume 2, pp. 13-51, Orlando FL: Academic Press.

Schuller, T, Raffe, D., Morgan-Klein, B. & Clark, I. (1999) *Part-Time Higher Education*, London: Jessica Kingsley Publishers.

Schunk, D. (1994) 'Self-regulation of self-efficacy and attributions in academic settings', in D. Schunk & B. Zimmerman (Eds.) *Self-regulation of Learning and Performance: Issues and Educational Applications*, pp. 75-99, Hillsdale, NJ. Erlbaum.

Seligman, M., Reivich, K., Jaycox, L. & Gilham, J. (1995) *The Optimistic Child*, Boston: Houghton Mifflin.

Stipek, D. & Gralinski, J. (1996) Children's beliefs about intelligence and school performance, *Journal of Educational Psychology*, 88 (3): 397-407.

Weiner, B. (1986) *An Attributional Theory of Achievement Motivation and Emotion*,. New York: Springer-Verlag.

Wolters, C. (1998) Self-regulated learning and college students' regulation of motivation, *Journal of Educational Psychology*, 90 (2): 224-235.

Biographical Note

Effie Maclellan is a Reader in Educational Studies at the University of Strathclyde and is Vice-Dean (Research) in the Faculty of Education. A Chartered Psychologist, she has research interests in learning, teaching and assessment and is engaged in a number of projects which seek to clarify what 'good practice' in higher education might mean. [email: e.maclellan@strath.ac.uk]