# International Guide to Student Achievement

Edited by

## John Hattie

University of Melbourne

### Eric M. Anderman

Ohio State University



First published 2013 by Routledge 711 Third Avenue, New York, NY 10017

Simultaneously published in the UK by Routledge 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Routledge is an imprint of the Taylor & Francis Group, an informa business

© 2013 Taylor & Francis

The right of the editors to be identified as the authors of the editorial material, and of the authors for their individual chapters, has been asserted in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

Trademark notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

Library of Congress Cataloging in Publication Data

International guide to student achievement / [edited by] John Hattie, Eric M. Anderman.

strategies, and their teacher training programs"— Provided by publisher. Includes bibliographical references and index.

1. Academic achievement—Cross-cultural studies. I. Hattie, John. II. Anderman, Eric M.

LB1062.6.I72 2012 370.15'4—dc23 2012022523

ISBN: 978-0-415-87898-2 (hbk) ISBN: 978-0-415-87901-9 (pbk) ISBN: 978-0-203-85039-8 (ebk)

Typeset in Times by EvS Communication Networx, Inc.

6.17	H. M. G. Watt and P. W. Richardson	2/1
6.18	The Relation of Teacher Characteristics to Student Achievement Xin Ma	274
	on 7. Influences from the Curriculum on Editor: Rayne Sperling	277
7.1	Values Education Programs Terence Lovat	279
7.2	Activity-Based Learning Strategies  Kira J. Carbonneau and Scott C. Marley	282
7.3	Bilingual Education Programs and Student Achievement  Jill Fitzgerald and Jackie Eunjung Relyea-Kim	285
7.4	Intelligent Tutors—Strategy Types  Bonnie J. F. Meyer	289
7.5	Creativity and Creativity Programs  Heather L. Hammond, Lauren E. Skidmore, Amanda Wilcox-Herzog, and James C. Kaufman	292
7.6	Outdoor Education Justin Dillon	296
7.7	Role of Discussion in Reading Comprehension  Ian A. G. Wilkinson and Kathryn Nelson	299
7.8	The Impact of Calculators on Student Achievement in the K-12 Mathematics Classroom Aimee J. Ellington	303
7.9	Second Language Vocabulary  Yongqi Gu	307
7.10	Language Teaching Curricula  Eli Hinkel	310
7.11	Measurement of History Achievement in the United States and Europe  Mark Smith, Joel Breakstone, Sam Wineburg	313
7.12	Reading: Phonics Instruction William E. Tunmer and Alison W. Arrow	316
7.13	Repeated Reading William J. Therrien and Sarah J. Watt	320
7.14	Reading: Sentence Combining: Grammar Programs  Bruce Saddler and Nicole Bak	322
7.15	Extracurricular Activities in Secondary Schools Boaz Shulruf and Grace Ying Wang	324
7.16	Improving Academic Achievement with Social Skills Frank M. Gresham, Michael J. Vance, and Jeffrey Chenier	327

## 6.17

# **Teacher Motivation and Student Achievement Outcomes**

H. M. G. WATT AND P. W. RICHARDSON

Monash University

### introduction

Motivation theorists share the view that motivation is an internal state that initiates, regulates, and sustains behaviour. There are various theoretical models of motivation that focus on different components and processes. Until recently, researchers have predominantly focused on student motivations, and their relation to student participation, learning, and achievement. Lately, theories and concepts developed in the student motivation literature have been fruitfully applied to the study of teacher motivation (Richardson & Watt, 2010).

Teacher motivations impact teacher behaviours, and thereby students' own motivations. In turn, students' motivations impact their participation, effort, aspirations, learning and achievement (c.f., Section 2 this Handbook). In his seminal review, Brophy (1986) included choice, sincere praise, reinforcement, enthusiasm, guidance, modelling, and interest induction as teacher behaviours that promote student motivation and achievement. Public competition, frequent drill and practice, and insincere teacher praise and criticism tend to undermine student interest and motivation (e.g., Turner et al., 2002).

### Research Evidence

The major teacher motivation theories are currently self-efficacy theory, self-determination theory (SDT), expectancy-value theory, and goal theory. Of these, teacher self-efficacy research has the longest history; it refers to "the teacher's belief in her and his ability to organize and execute the courses of action required to successfully accomplish a specific teaching task in a particular context" (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998, p. 233). Teachers who have high self-efficacy are more likely to try new teaching strategies, implement classroom management methods which enhance student autonomy, provide

particular assistance to low achievers, build student competence beliefs, set attainable student goals, persist in the face of failure, be more committed to the profession, and experience less burnout (c.f., Ross, Entry 6.15 this volume). On the other hand, exaggerated levels of self-efficacy can impede innovation, learning new skills, and encumber critical reflection (Wheatley, 2002). Self-efficacy is most malleable early in learning (Bandura, 1997) but resistant to change once established; it has been found to increase through teacher education then decrease during early career teaching, possibly due to reduced social and structural supports. Beyond the individual, collective teacher efficacy is an emergent group-level factor which is a relatively stable attribute of school culture, and once established, is resistant to change (Woolfolk Hoy, Hoy, & Davis, 2009). It interacts with individual teacher self-efficacy to motivate increased effort, persistence, resilience, and consequently, student outcomes. The mechanisms by which teacher self-efficacy beliefs can bring about consequences for students are not yet clear, nor, whether causal inferences are warranted.

Self-determination theory (SDT) posits a general theory of basic human needs based on autonomy, competence, and relatedness (Deci & Ryan, 2000). Autonomy supportive teachers facilitate and encourage students in their goal pursuit, providing choice, rationales, empathy, and structure, while avoiding high levels of control (Reeve, Bolt, & Cai, 1999). Teachers who are engaged, committed, and enjoy their work, provide greater autonomy support to their students, who exhibit higher intrinsic motivation, self-regulated learning, and achievement. Specifically, teacher involvement (affection, attunement, dependability), structure (clarity of expectations, adjustment of teaching strategies), and autonomy support (respect, relevance) have been found to affect students' behavioral engagement and emotions (Skinner & Belmont, 1993). Different student characteristics also elicit different teacher behaviours, highlighting the need to intervene into teacher-student interactions. Otherwise teachers tend to magnify students' initial levels of motivation, producing increased motivation for the already motivated, but decreased levels for the initially unmotivated.

Competence. Teachers' expectancies for students (see Jussim, Entry 6.8 this volume) can have profound influences on students' perceptions of competence, learning, and achievement. These expectations are often communicated nonverbally and unintentionally, but students nonetheless perceive and internalise them, with direct consequences for self-efficacy, motivation, effort, and achievement. Implicit teacher prejudices shape teacher expectancies; for example, teachers who evaluate their students as less intelligent through the lens of prejudiced attitudes, engender negative achievement consequences (c.f., Bishop, Entry 2.18 this volume).

Relatedness. Relatedness is fostered by teacher warmth and affect to students. This acutely influences how students experience their classrooms, their subsequent goals and achievement. When interactions and relationships are emotionally supportive, nurturing, and facilitative of goal achievement through the provision of help and instruction, students come to value and pursue the academic and social goals conveyed by their teachers (Wentzel, 2009). High expectations for student achievement in combination with teacher caring and support are essential ingredients to positive relationships.

Expectancy-Value Theory. Expectancy-value theroy (Eccles, 2005) has provided a powerful lens through which to understand the complexity of teacher motivations, the enduring impact they have on career persistence and satisfaction, consequences for teachers' psychological well-being, and implications for student achievement. Motivations most endorsed for choosing teaching as a career include intrinsic value, perceived teaching abilities, to make a social contribution, work with youth, and shape the future of youth. Those initial career motivations subsequently have a positive impact on beginning teachers' career satisfaction and plans to persist in the profession. In contrast, negative longitudinal correlations occur as a result of entering teaching as a "fallback" career motivation; and, personal utility motivations (job security, time for family, job transferability) exhibit negative or nonsignificant relationships. A typology of beginning teachers has been identified, who hold particular constellations of motivations even at the outset of their careers (see Watt & Richardson, 2008).

Goal Theory. Recent work using the conceptual framework of goal theory, has demonstrated that the classroom is an achievement arena for teachers too, predicting teacher behaviours and thereby student outcomes. Teacher mastery and ability-avoidance goals have been respectively related to their positive and negative patterns of classroom com-

munication and behaviour (Butler & Shibaz, 2008), while relational goals are the most critical.

### **Summary and Recommendations**

Similar elements have been identified at the school level as at the class level that shape student, and presumably, teacher motivations. Environments characterised by centralised control and high levels of bureaucracy and compliance serve to dampen the positive effects which teacher motivations can otherwise have. Whereas, a decentralised model of decision making, a school climate reflecting feelings of unity, pride, trust, cooperation, acceptance of differences, security, shared goals, and a supportive school leadership, allow the space and opportunity for skilled and motivated teachers to be more effective (Rowan, Chiang, & Miller, 1997). Motivated teachers are more likely to support and implement progressive reforms, experience higher career satisfaction, and remain in the profession longer. But, when teachers perceive pressures from above (e.g., curriculum and performance standards) and below (e.g., demanding students), they become less self-determined toward their work, and more controlling with their students, which negatively impacts student intrinsic motivation and sense of autonomy (Pelletier, Seguin-Levesque, & Legault, 2002; Roth, Assor, Kanat-Maymon, & Kaplan, 2007). Although we know working with children and adolescents is consistently strongly endorsed as a reason for wanting to be a teacher. policy measures designed to increase teacher accountability, through measuring student achievement, have significantly changed the nature of teachers' work and reduced the time which can be spent in teacher-student interactions. Under these circumstances, teacher motivation is a double-edged sword that can lead to reduced engagement if highly valued goals are not attained (de Jesus & Lens, 2005).

Teachers exhibit higher levels of job stress than those in other professions (Stoeber & Rennert, 2008). Teachers who maintain their high motivations in situations where their goals cannot be attained are more likely to experience burnout (de Jesus & Lens, 2005), a condition linked to teacher turnover, low professional commitment, poor coping strategies, low work satisfaction and well-being. In contrast, worn out teachers reduce their effort and occupational engagement to cope with chronic stressors, and are no longer personally invested in performing well. Three times as many teachers were worn out than burned out (Stephenson, 1990). Teachers worn down by their work exhibit reduced work goals, lower responsibility for work outcomes, lower idealism, heightened emotional detachment, work alienation, and self-interest (Burke & Greenglass, 1995). When teachers become burned out, or worn out, their students' achievement outcomes are likely to suffer because they are more concerned with their personal survival. In contrast, motivated teachers, working in contexts which allow them to achieve their goals, will promote student motivations, learning, and achievement outcomes.

#### References

- Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman.
- Brophy, J. (1986). Teacher influences on student achievement. American Psychologist, 41, 1069–1077.
- Burke, R. J., & Greenglass, E. R. (1995). A longitudinal examination of the Cherniss model of psychological burnout. Social Science Medicine, 40, 1357-1363.
- Butler, R., & Shibaz, L. (2008). Achievement goals for teaching as predictors of students' perceptions of instructional practices and students' help seeking and cheating. *Learning and Instruction*, 18, 453–467.
- de Jesus, S. N., & Lens, W. (2005). An integrated model for the study of teacher motivation. Applied Psychology—An International Review (Psychologie Appliquée—Revue Internationale), 54(1), 119-134.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, 11, 227–268.
- Eccles, J. S. (2005). Subjective task value and the Eccles et al. model of achievement-related choices. In A. J. Elliot & C. S. Dweck (Eds.), Handbook of competence and motivation (pp. 105-121). New York: Guilford.
- Pelletier, L. G., Seguin-Levesque, C., & Legault, L. (2002). Pressure from above and pressure from below as determinants of teachers' motivation and teaching behaviors. *Journal of Educational Psychol*ogy, 94(1), 186-196.
- Reeve, J., Bolt, E., & Cai, Y. (1999). Autonomy-supportive teachers: How they teach and motivate students. *Journal of Educational Psychology*, 91(3), 537–548.
- Richardson, P. W., & Watt, H. M. G. (2010). Current and future directions in teacher motivation research. In T. C. Urdan & S. A. Karabenick (Eds.), Advances in motivation and achievement: Vol. 16B. The decade ahead: Applications and contexts of motivation and achievement (pp. 139–173). Bingley, England: Emerald.

- Roth, G., Assor, A., Kanat-Maymon, Y., & Kaplan, H. (2007). Autonomous motivation for teaching: How self-determined teaching may lead to self-determined learning. *Journal of Educational Psychology*, 99, 761-774.
- Rowan, B., Chiang, F.-S., & Miller, R. J. (1997). Using research on employees' performance to study the effects of teachers on students' achievement Sociology of Education, 70(4), 256-284.
- Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behaviour and student engagement across the school year. *Journal of Educational Psychology*, 85, 571–581.
- Stephenson, D. (1990). Affective consequences of teachers' psychological investment. *Journal of Educational Research*, 84(1), 53–57.
- Stoeber, J., & Rennert, D. (2008). Perfectionism in school teachers: Relations with stress appraisals, coping styles, and burnout. Anxiety, Stress, & Coping, 21, 37-53.
- Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. Review of Educational Research 68(2), 202-248.
- Turner, J. C., Midgley, C., Meyer, D. K., Gheen, M., Anderman, E. M., Kang, Y., & Patrick, H. (2002). The classroom environment and students' reports of avoidance strategies in mathematics: A multimethod study. *Journal of Educational Psychology*, 94(1), 88–106.
- Watt, H. M. G., & Richardson, P. W. (2008). Motivations, perceptions, and aspirations concerning teaching as a career for different types of beginning teachers. *Learning and Instruction*, 18, 408–428.
- Wentzel, K. (2009). Students' relationships with teachers as motivational contexts. In K. Wentzel & A. Wigfield (Eds.), *Handbook of motivation at school*. New York: Routledge.
- Wheatley, K. F. (2002). The potential benefits of teacher efficacy doubts for educational reform. *Teaching and Teacher Education*, 18, 5–22.
- Woolfolk Hoy, Hoy, & Davis, (2009). Teachers' self-efficacy beliefs. In K. Wentzel & A. Wingfield (Eds.), Handbook of motivation at school (pp. 627–654). New York: Routledge,