

Moral reasoning of in-service and pre-service teachers: a review of the research

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Although concerns about the moral domain of teaching have been expressed for more than 30 years, empirical studies investigating moral reasoning of in-service and pre-service teachers are sparse. Even fewer studies have investigated the effectiveness of educational interventions to advance moral reasoning in these populations. The purpose of this paper is to review the research on moral reasoning of and moral interventions with in-service and pre-service teachers and to suggest implications for teacher education programs. Results of the review indicate that moral reasoning levels of in-service and pre-service teachers are relatively low but can be increased through proper intervention.

Teaching has been described as a moral enterprise (Goodlad, Soder & Sirotnik, 1990). Accordingly, teachers should be able to make sound moral judgements, look beyond their own self-interest and take a broad view of morality that considers the perspectives of all students who represent diverse racial, ethnic and cultural backgrounds. The moral teacher will recognize and respect the basic worth and dignity of all human beings (Cummings *et al.*, 2001).

Such a view of morality has been described by Lawrence Kohlberg (1981, 1987), whose theory of moral development assumes a relationship between cognitive development and moral reasoning. According to Kohlberg, moral development proceeds through three levels (pre-conventional, conventional and post-conventional) and six stages. At the post-conventional level, moral decisions are based on the cognitive ability to take the perspective of all members of society and to consider whether or not the laws and standards of society uphold or violate principles of justice. At this level, moral decisions are based on one's individual conscience. Kohlberg has called the post-conventional level, the *principled* level of moral reasoning.

Kohlberg's theory has been criticized for its perceived bias against females (Gilligan, 1982) and its claims of universal and invariant stages (Liebert, 1984).

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However, a number of studies have found that gender is a trivial variable in accounting for variance on measures of moral reasoning, including both the Moral Judgment Interview and the Defining Issues Test (Rest, 1979; Thoma, 1986; Walker, 1991; Rest *et al.*, 1999). Also, over 50 Kohlbergian studies have been conducted in diverse cultures and many have found evidence of the universality of Kohlberg's six-stage scheme (Snarey, 1985; Rest, *et al.*, 1999). However, conditions for developing higher-stage reasoning are much more likely to be present in complex, democratic cultures such as the USA, Israel and Germany than in simpler, more homogeneous societies (Snarey, 1985). Although other theories of moral development have been proposed (see Gilligan, 1982; Gibbs, Basinger & Fuller, 1992), most of these are based on variations of Kohlberg's work. In sum, Kohlberg's work continues to strongly influence thinking about morality and moral development (Wygant & Williams, 1995), and has been described as 'the linchpin for studying morality from the inside, and it is the major work on moral judgment' (Rest, Thoma & Edwards, 1997, p. 6).

Measurement of principled moral reasoning

Kohlberg's instrument, the Moral Judgment Interview (MJI) (Colby *et al.*, 1987), a standardized, individualized test, was the first and most widely-used measure of moral reasoning. Although a great deal of research has been conducted with the MJI, proper administration of the test requires a great deal of time both in training and administration. Consequently, a more recent test, the Defining Issues Test (DIT) (Rest, 1979) has become a more popular measure of moral reasoning. The DIT, a multiple-choice test, is based on moral stage typology initially defined by Kohlberg. As with the MJI, DIT items are based on hypothetical moral dilemmas, which Rest developed directly from Kohlbergian, in-depth interviews. The assumption is that people define the most important issue of a dilemma in different ways, and that the selection of items on the DIT indicates a person's level of principled moral reasoning. The most frequently used index of the DIT is the P-score, a measure of post-conventional, or *principled*, moral reasoning. While not precisely accurate, the P-score may be thought of as the percentage of principled (post-conventional) items chosen by the individual to define the central issues of a moral dilemma (see Rest, 1993, for scoring details). Thus, a P-score of 35 indicates that 35% of the items chosen to define an issue are reflective of principled, or post-conventional, moral reasoning.

The moral dimension of teaching

Teachers who reason at the post-conventional or principled level are more likely than teachers who reason at lower levels to motivate students' learning and healthy social development, to have heightened awareness of their own moral and ethical responsibilities, and to take seriously their responsibility to emphasize the moral dimension of teaching (Chang, 1994; Cummings *et al.*, 2001). According to Reiman

and Peace (2002), the more complex the level of development, the more likely a teacher is to be successful in meeting the moral, intellectual and interpersonal demands of the public school environment. Specifically, teachers who reason at higher levels are able to empathize with students, are tolerant of diverse viewpoints, and are flexible in their teaching approaches (O'Keefe & Johnston, 1989).

According to Beyer (1997), the teacher's ability to consider the moral dimensions of teaching is essential for working in schools that operate within a culturally diverse democratic society. Such teachers are at higher levels of cognitive development, which makes them more likely to demonstrate tolerance toward minority groups (Guthrie, King & Palmer, 2000).

On the other hand, teachers who reason at lower levels are not effective teacher mentors, they negatively and inaccurately evaluate student teachers who function at higher levels, and they take a singular approach to instruction (Thies-Sprinthall, 1984; Reiman & Peace, 2002). Beyer (1997) describes the consequences of failing to consider the moral aspects of teaching:

When teachers do not consider the moral dimensions of education, or the moral qualities of educative experience, other people and agencies including textbook publishers, individuals and organizations representing business and industry, politicians, and special interest groups have a relatively unobstructed hand in determining the moral perspectives communicated to students. (p. 247)

Because of the importance for teachers to provide moral leadership, research investigating moral reasoning of and moral interventions with in-service and pre-service teachers seems imperative. However, although much has been written about the need to consider the moral dimension of teaching, actual empirical studies are rare. For this review, an extensive search was conducted that included all published, empirical studies related to (a) ethical/moral reasoning of pre-service and in-service teachers, and (b) empirically-based interventions designed to affect moral reasoning of pre-service and in-service teachers.

Research on the moral dimension of teaching

As stated above, while concerns about the moral dimension of teaching have been raised for decades, little attention has been given to the use of scientific approaches to study moral reasoning of education professionals. Results of the few studies that have been conducted raise concerns. For example, Diessner (cited in Chang, 1994) has reported that most in-service teachers reasoned only at the conventional level as measured by Kohlberg's MJI (Colby *et al.*, 1987). Further, when the DIT (Rest, 1979) was administered to in-service teachers, their scores were at the principled level only 30% to 50% of the time. In summarizing these findings, Chang (1994) suggests that 'although teaching is moral by nature and teachers make moral decisions continuously, teachers do not seem to be well prepared for this aspect of their jobs' (p. 72).

Of the few studies that have investigated principled moral reasoning in pre-service teacher education students (in the absence of intervention), most found lower moral

reasoning scores for these students than for college students majoring in other disciplines (Yeazell & Johnson, 1988; Lampe, 1994; McNeel, 1994; Cummings *et al.*, 2001). Furthermore, there is no improvement of education students' moral reasoning scores from freshman to senior year (Yeazell & Johnson, 1988; McNeel, 1994; Cummings *et al.* 2001) and moral reasoning scores of seniors in education have been found to be more like those of college freshmen in other majors (McNeel, 1994; Cummings *et al.*, 2001). An exception to these findings is a study by Derryberry *et al.* (2006), who found no differences in moral reasoning between education majors and liberal arts majors attending the same institution. However, as Derryberry *et al.* note, the findings apply to only one university and address categories of majors (education versus liberal arts) rather than specific majors within each category. Derryberry further suggests that future studies should involve a variety of different institutions addressing specific majors.

The findings of the above studies that education students did not improve their moral reasoning scores over their college career are somewhat puzzling. Most DIT studies of college undergraduates with majors other than education indicate significant increases in moral reasoning scores as students advance in age and education level (Thoma, 1986; Boom & Molenaar, 1989; Bakken & Ellsworth, 1990; Rest *et al.*, 1999). These increases have been attributed to the college experience itself, which has been found to have a greater effect on moral reasoning than other college-related variables such as verbal abilities, maths skills or self-concept (McNeel, 1994; Rest *et al.*, 1999). According to Rest (1993), 'among demographic variables, education is by far the most powerfully associated with DIT scores' (p. 19).

For the education major, however, the college experience does not appear to influence moral reasoning. A number of researchers have suggested that factors inherent in the education curriculum may account for the deficiency in moral reasoning of students (Yeazell & Johnson, 1988; Lampe, 1994; McNeel, 1994; Rest *et al.*, 1999). According to Rest, *et al.* (1999), 'The critical characteristic of a college for promoting moral judgment seems to be a commitment to critical reflection' (p. 73). This commitment may not be present in many teacher education programs, which have been criticized for failing to integrate awareness of and discussion about ethical issues in teaching (Beyer, 1991, 1997; Goodlad, 1994; Yost, 1997). Instead, these programs tend to emphasize courses that are skills- and methods-oriented and devoted to technical competence at the expense of courses that incorporate more abstract, theoretical content requiring students to stretch themselves cognitively (Howey & Zimpher, 1989; Sirotnik, 1990; Beyer, 1991, 1997; Goodlad, 1994; McNeel, 1994; Yost, 1997; Cummings *et al.*, 2001; Cummings *et al.*, 2003).

To examine the validity of the above criticism, Cummings *et al.* (2003) investigated the ratio of skills-oriented methods courses to theoretically-based courses in 30 college-level elementary education programs. The researchers examined course descriptions involving a total of 526 courses. The degree of agreement among three independent evaluators was 97.72% for course classification as either theory or method. Across the 30 institutions examined, the mean of theory

course credit hours was 7.03 compared to a mean of 47.85 for methods course credit hours. Analysis of credit hours for all 526 courses yielded a mean of 12.80% credit hours that were classified as theory. Thus, of all the courses examined, nearly 90% were skills-oriented methods courses, supporting the claim that teacher education curricula may not include enough courses that require critical thinking. According to Cummings *et al.* (2003),

Teacher education students should be exposed to course content that is thought provoking and challenges thinking. Otherwise, once they become teachers, they will have a repertoire of teaching methods but may not have conceptual understanding about how and with whom to implement these methods. Consequently, they risk becoming technicians instead of morally engaged people who think critically about and reflect upon their ethical and moral responsibilities to their students. (p. 167)

In line with the above criticisms, Yeazell and Johnson (1988) recommend that the study of moral reasoning and ethical issues be a critical part of a prospective teacher's program. Otherwise, teacher education students may become teachers whose moral judgement is no higher than that of their students, raising 'serious questions about how they will make decisions in their daily classroom activities regarding moral situations such as fairness, use of scarce time and resources, due process, and classroom discipline' (Yeazell & Johnson, 1988, p. 69).

Research on interventions to increase principled moral reasoning scores

Numerous studies provide evidence that principled moral reasoning can be stimulated by deliberate educational interventions. Rest, *et al.* (1999) describe intervention studies as follows:

Intervention studies are like longitudinal studies in testing and retesting the same subjects... Intervention studies are usually shorter in duration than longitudinal studies (e.g. typically less than one year)...; and intervention studies also have more control over what experiences the subjects have between testings. (p. 74)

Intervention studies using the DIT have been conducted with a variety of participants ranging from adolescents to adults. Most studies have been conducted with high school students or with undergraduate and graduate college students majoring in diverse fields including business, criminal justice, nursing, law, liberal arts (humanities, English, social sciences [psychology, sociology], dentistry, veterinary medicine and medicine. (For extensive reviews of these studies, see Schlaefli, Rest & Thoma, 1985 and Rest & Narvaez, 1994)

Research on intervention studies with in-service and pre-service teachers

An extensive review of the literature reveals only a few intervention studies with either in-service or pre-service teachers.

Intervention studies with in-service teachers. Sprinthall and Bernier (1979) attempted to advance the moral development of in-service teachers by teaching them to engage in activities such as individualizing instruction, practising and refining interviewing

skills and learning self-directed behaviour modification. Only modest gains were found. Other researchers (Oja & Sprintall, 1978; Thies-Sprinthall, 1980, 1984; Reiman & Thies-Sprinthall, 1993) have used guided reflection to enhance social role-taking, moral reasoning and conceptual complexity in mentor teachers working with student teachers. Significant gains were found on the DIT and the Hunt Paragraph Completion Test (Miller, 1981), a test of cognitive complexity. In their conclusions, the authors suggested the necessity for more theory-based teacher education programs that apply developmental concepts to increase cognitive complexity and principled moral reasoning in education students.

In a more recent study, Reiman and Peace (2002) conducted a 7-month intervention of expert teachers who participated in a professional development program (the learning-teaching framework) to support peer coaching. Significant positive gains in moral reasoning as measured by the DIT were achieved.

Intervention studies with pre-service education students. A search of the literature revealed only a few intervention studies to advance moral reasoning in pre-service teacher education students. Two of these were conducted nearly 30 years ago by Hurt (1977) and Shafer (1978). Hurt taught counselling skills to 48 teacher education students to promote empathy through activities such as peer counselling and self-analysis. Significant pre- to post-test gains were found for the DIT and the Loevinger Sentence Completion Test (Loevinger & Wessler, 1970). In the second study, Shafer (1978) engaged 57 elementary science education students in discussion of moral dilemmas such as those posed by Kohlberg (1981, 1984). Pre- to post-test gains on DIT scores were significant. Authors of both studies concluded that deliberate interventions to positively affect cognitive, ego and moral development of pre-service education students should be a goal of teacher education programs.

In a more recent longitudinal study by Reiman (2001), teacher education students were exposed to an innovative curriculum that promoted social role-taking with guided reflection. The mean P-score gain for the longitudinal cohort was 12.54 with a large effect size ($d=.73$). Reiman concluded that integrating role-taking/reflection into teacher education programs accounts for greater gains in post-conventional moral thinking. In another intervention study with pre-service teachers, Cummings, Maddux, & Richmond (2006) implemented a program (classroom instruction in moral development theory and dilemma discussion via online bulletin boards) to advance moral reasoning in undergraduate education students. Pre- to post-intervention moral reasoning scores of the intervention group were compared with those of control groups (elementary and secondary education students and students enrolled in philosophy and English literature courses). Results indicated that direct instruction in moral development theory and dilemma discussion advanced moral reasoning of education students.

Additionally, Reiman & Johnson (2003) summarized data from twelve psychological and professional development interventions (DTPE) that ranged from pre-service teacher education through induction (first three years of teaching) and ongoing professional development for practicing teachers. These studies looked at

the effects of the DTPE intervention on ethical/moral judgement as measured by the DIT, conceptual reflective judgement as measured by the Paragraph Completion Test (Hunt, 1976) and ego judgement as measured by the Loevinger Sentence Completion Test (Loevinger, 1976). Of the twelve studies that examined the effect of DTPE on ethical/moral judgement, the average effect size was +.53, which is a moderately large effect size. In their review, the authors concluded that intervention can produce gains in moral reasoning as measured by the DIT.

Intervention studies with students with college majors other than education. As stated above, only a few intervention studies have been conducted with in-service and pre-service teachers. However, as mentioned previously, numerous intervention studies have been conducted with students with college majors other than education. Results of most of these studies provide support for the effectiveness of interventions to advance moral reasoning.

Schlaefli, Rest and Thoma (1985) conducted a meta-analysis of 55 intervention studies using the Defining Issues Test (DIT). The majority of the studies (30 out of 55) used peer discussion of controversial moral dilemmas designed to challenge thinking, re-examine assumptions, take others' points of view, set up logical arguments and respond rationally to counterarguments. Other programs used different approaches. These included: (a) attempts to increase empathy through self-reflection and reflection about the self in relation to others; (b) instruction in general theories of developmental psychology, including Kohlberg's theory; and (c) discussions of moral and ethical issues within academic course content (e.g. criminal justice, political science, great books, social studies). Principal findings of the meta-analysis indicate that interventions involving both discussions of interpersonal dilemmas and presentation of Kohlberg's theory of moral development produced moderate effect sizes, and treatments of 3 to 12 weeks were ideal.

Rest and Narvaez (1994) included descriptions of a number of intervention studies with college students majoring in diverse professional programs, none of which involved education. In all studies, experimental or treatment groups showed significantly greater gains on DIT scores than control or comparison groups. The most successful programs (a) taught self-reflection; (b) stimulated growth in cognitive processes, such as ego strength, interpersonal skills, cognitive complexity, role-taking, empathy; (c) integrated instruction in moral and ethical issues within a series of courses; or (d) directly taught logical and philosophical concepts critical to the formulation of principled moral reasoning followed by presentation and discussion of challenging cases of moral problem solving. The last approach, developed by Penn (1990), showed the highest gains in students' DIT scores of any moral intervention.

Finally, Rest *et al.* (1999) cited over 60 publications on intervention studies in which the DIT was used as a measure of moral reasoning. The authors offered a number of suggestions for moral interventions similar to those described above. Again, Penn's (1990) model for intervention was identified as offering the most promise. Penn's approach is described below.

Penn's direct approach to moral intervention. This model first teaches participants the cognitive skills of logic, role-taking and justice operations, which are then practised in discussion of moral dilemmas. These skills, according to Penn, 'have been clearly identified by theory and research as the constitutive elements of moral reasoning' (p. 124).

Three intervention groups were included in the study. Group 1 participants (enrolled in undergraduate ethics classes) were taught formal logic and Kohlberg's theory of moral development, and then introduced to philosophical methods of ethical analysis and their application to social issues. Group 2 participants (enrolled in MBA ethics classes) and Group 3 participants (enrolled in undergraduate ethics classes) were taught Kohlberg's theory of moral development and philosophical methods of ethical analysis as applied to business and social issues, respectively. Pre- and post-test administration of the DIT was used with the three intervention and two comparison groups. Gains were significant for all of the intervention groups at the .0001 level. The average P-score gain for the three variations of the ethics intervention design was 12.94. According to Penn, a gain this large represents a fundamental restructuring of an individual's patterns of social thought—a very large change that normally represents four to six years of formal education.

As a rationale for the need to develop moral intervention programs, Penn (1990) makes the following claims:

- 1) There is a capability present within human consciousness which, when it is developed and exercised, significantly increases the probability of rational consensus on the just resolution of value conflicts. This is the capability Kohlberg and other cognitive developmentalists have identified as principled or post-conventional moral reasoning.
- 2) The capacity for principled moral reasoning, like the capacity for mathematical and scientific reasoning, can and must be developed by means of focused, systematic and long-term educational effort.
- 3) It is necessary to develop this human capacity for moral reasoning to its highest level in order to have rational individual and social direction in modern democratic and pluralistic societies.
- 4) Current efforts of our educational institutions and professional schools lack the focused, systematic approaches and long-term efforts necessary to develop effectively the capacity for principled moral reasoning among their graduates (p. 124).

To test the effectiveness of Penn's approach, McNeel and Frederickson (1999) developed a senior level moral education class (including education and business students) that included 'a study of basic concepts in ethics, moral dilemma discussion, direct teaching of moral development theory, study of the lives of moral exemplars, student class presentations on chosen ethical issues, and student applications of concepts to their lives' (p. 2). When compared to a control group of students who took courses that did not emphasize moral and ethical issues, the intervention group showed 'sharp moral judgment growth during the semester, nearly equal to the growth typically shown during the entire college experience' (p. 2), and this growth was maintained until the end of the semester. According to

McNeel and Frederickson, results of the study support Penn's findings that a direct intervention to advance moral reasoning is effective.

Implications for teacher education

Two possibilities exist to explain the consistently-found lower levels of moral reasoning demonstrated by education majors. The first possibility has to do with the characteristics of the students themselves. According to Cummings *et al.* (2001), 'Students may choose to major in education because they view it as a less difficult major than others. They believe that they will not have to work in the summer and will have more time for leisure activities, or they are responding to family pressure to go to school to get a job' (p. 154). If student characteristics have to do with lower levels of moral reasoning as Cummings, *et al.* (2001) and others (see Chang, 1994; Lampe, 1994; and McNeel, 1994) suggest, then it may be that a less reflective student is attracted to teaching as a profession.

The second possibility for lower moral reasoning in education majors may be related to the findings that these students' moral reasoning scores do not improve as they move through their undergraduate studies (Cummings *et al.*, 2001). This is not the case for other undergraduate students with majors other than education who do experience such growth over their college career (Thoma, 1986; Boom & Molenaar, 1989; Bakken & Ellsworth, 1990; McNeel, 1994; Rest *et al.*, 1999). In this case, factors related to the content of the teacher education curriculum may account for students' lack of progress in moral reasoning. As Cummings, *et al.* (2001) have stated

Teacher education programs often fail to integrate awareness of and discussion about ethical issues in teaching. They emphasize courses that are skill-oriented and devoted to technical competence and they do not include courses that incorporate more abstract, theoretical content requiring students to stretch themselves cognitively. Consequently, teachers who graduate from such programs...may not be able to reason about and respond to the many moral and ethical issues that arise daily in the context of the dynamic public school classroom. (p. 153)

Part of the explanation, then, for education students' lower moral reasoning scores rests on the possibility of an ideational poverty within the types of courses that education students experience, the emphasis of which is on the preparation of the teacher as a technician rather than as a critical thinker.

As Penn has demonstrated, university students who are taught the skills of logic and critical thought and are further challenged by content rich in idea and theory are much more likely to regard the moral domain as significant. Accordingly, such students are likely to make considerable gains in moral reasoning.

In sum, it is important to ensure that students who are selected as teacher education candidates possess the cognitive levels necessary to deal with moral and intellectual demands. At least as important, however, is for undergraduate teacher education programs to provide students with a rich and stimulating curriculum that enhances critical thinking and moral reflection. Teachers who complete such programs may be better able to deal with complex school and community

environments, demonstrate empathy with a diverse student body and understand the moral challenges encountered in schools. Upon completion of their college education, teachers can potentially affect the learning experiences of an entire generation of students. Because the public school classroom setting itself is a rich and dynamic universe of moral circumstance, it is vital that the teacher be able to recognize and deal with these complexities.

Conclusions

Although concerns about the moral domain of teaching have been expressed for more than 30 years, empirical studies investigating moral reasoning in teacher education students are sparse. Even fewer studies have investigated the effectiveness of educational interventions to advance moral reasoning in these students.

Given recent concerns about school violence, high-risk behaviour of children and adolescents and other negative social pressures on students (Sylwester, 1997; Lickona, 1998), there are increasing demands made on teachers to act as moral influences on young people (Lickona, 1998; Dweck, 1999). Accordingly, in view of the important findings of the few intervention studies that have been conducted with pre-service and in-service teachers, there is a need to continue to investigate empirically the moral reasoning of both in-service and pre-service teachers. There is also a need to further test and refine research-based intervention programs that have shown to be promising.

References

- Bakken, L. & Ellsworth, R. (1990) Moral development in adulthood: its relationship to age, sex, and education, *Education Research Quarterly*, 14(2), 2–9.
- Beyer, L. E. (1991) Schooling, moral commitment, and the preparation of teachers, *Journal of Teacher Education*, 42(3), 205–215.
- Beyer, L. E. (1997) The moral contours of teacher education, *Journal of Teacher Education*, 48(4), 245–253.
- Boom, J. & Molenaar, P. (1989) A developmental model of hierarchical stage structure in objective moral judgments, *Developmental Review*, 9(2), 133–145.
- Chang, F. Y. (1994) School teachers' moral reasoning, in: J. R. Rest & D. Narvaez (Eds) *Moral development in the professions: psychology and applied ethics* (Hillsdale, NJ, Lawrence Erlbaum), 71–83.
- Colby, A., Kohlberg, L., Speicher, B., Hewer, A., Candee, D. & Gibbs, J. et al. (1987) *The measurement of moral judgment (Vol. 1 and 2)* (New York, Cambridge University Press).
- Cummings, R., Dyas, L., Maddux, C. D. & Kochman, A. (2001) Principled moral reasoning and behavior of preservice teacher education students, *American Education Research Journal*, 38(1), 143–158.
- Cummings, R., Maddux, C. D. & Richmond, A. (2006) The effects of direct instruction in moral development theory and participation in moral dilemma discussion on measures of moral reasoning and cognitive complexity, paper presented at the *Annual Meeting of the American Educational Research Association*, San Francisco, CA, 7–11 April.
- Cummings, R., Wiest, L., Lamitina, D. & Maddux, C. (2003) Teacher education curricula and moral reasoning, *Academic Exchange Quarterly*, 7(1), 163–168.
- Derryberry, W. P., Snyder, H., Wilson, T. & Barger, B. (2006) Moral judgment differences in education and liberal arts majors: cause for concern, *Journal of College and Character*, 7(4), 1–10.

- Dweck, C. (1999) Caution—praise can be dangerous, *American Educator*, 23(1), 4–9.
- Gibbs, J. C., Basinger, K. S. & Fuller, D. (1992) *Moral maturity: measuring the development of sociomoral reflection* (Hillsdale, NJ, Lawrence Erlbaum).
- Gilligan, C. (1982) *In a different voice: psychological theory and women's development* (Cambridge, MA, Harvard University Press).
- Goodlad, J. I. (1994) *Educational renewal* (San Francisco, CA, Jossey-Bass).
- Goodlad, J. I., Soder, R. & Sirotnik, K. A. (Eds) (1990) *The moral dimension of teaching* (San Francisco, CA, Jossey-Bass).
- Guthrie, B. L., King, P. M. & Palmer, C. J. (2000) Higher education and reducing prejudice: research on cognitive capabilities underlying tolerance, *Diversity Digest*, 4(3), 10–23.
- Howey, K. R. & Zimpher, N. L. (1989) *Profiles of preservice teacher education* (Albany, NY, State University of New York Press).
- Hunt, D. (1976) Teachers' adaptation: reading and flexing to students, *Journal of Teacher Education*, 27(3), 268–275.
- Hurt, B. L. (1977) Psychological education for teacher education students: a cognitive-developmental curriculum, *The Counseling Psychologist*, 6(4), 57–60.
- Kohlberg, L. (1981) *Essays on moral development* (Vol. 1): *The philosophy of moral development: moral stages and the idea of justice* (San Francisco, CA, Harper and Row).
- Kohlberg, L. (1984) *Essays on moral development* (Vol. II): *the psychology of moral development* (San Francisco, CA, Harper and Row).
- Kohlberg, L. (1987) *Child psychology and childhood education: a cognitive-developmental view* (New York, Longman).
- Lampe, J. R. (1994) Teacher education students' moral development and ethical reasoning processes, paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA, April.
- Lickona, T. (1998) Character education: seven crucial issues, *Action in Teacher Education*, 20(4), 77–84.
- Liebert, R. M. (1984) What develops in moral development? in: W. M. Kurtines & J. L. Gewirtz (Eds) *Morality, moral behavior and moral development* (Toronto, ON, Allyn and Bacon), 177–192.
- Loevinger, J. (1976) *Ego development: conceptions and theories* (San Francisco, CA, Jossey-Bass).
- Loevinger, J. & Wessler, R. (1970) *Measuring ego development* (Vol. 1) (San Francisco, CA, Jossey-Bass).
- McNeel, S. P. (1994) College teaching and student moral development, in: J. R. Rest & D. Narvaez (Eds) *Moral development in the professions: psychology and applied Ethics* (Hillsdale, NJ, Lawrence Erlbaum), 27–49.
- McNeel, S. P. & Frederickson, J. (1999) Being just in an unjust world: moral education for college seniors, paper presented at the Annual Meeting of the American Educational Research Association, Minneapolis, MN, 18–21 November.
- Miller, A. (1981) Conceptual matching models and interactional research in education, *Review of Educational Research*, 51(1), 33–84.
- Oja, S. & Sprinthall, N. A. (1978) Psychological and moral development of teachers, in: N. A. Sprinthall & R. L. Mosher (Eds) *Value development as the aim of education* (Schenectady, NY, Character Research Press), 218–225.
- O'Keefe, P. & Johnston, M. (1989) Perspective-taking and teacher effectiveness: a connecting thread through these developmental literatures, *The Journal of Teacher Education*, 40(3), 14–20.
- Penn, W. (1990) Teaching ethics—a direct approach, *Journal of Moral Education*, 19(2), 124–138.
- Reiman, A. J. (2001) A four-year longitudinal study of principled judgment reasoning in teacher education students, paper presented at the Annual Meeting of the American Educational Research Association, Seattle, WA, 10–14 April.

- Reiman, A. J. & Johnson, L. (2003) Promoting teacher professional judgment, *Journal of Research in Education*, 13(1), 1–11.
- Reiman, A. & Peace, S. D. (2002) Promoting teachers' moral reasoning and collaborative inquiry performance: a developmental role-taking and guided inquiry study, *Journal of Moral Education*, 31(1), 51–66.
- Reiman, A. J. & Thies-Sprinthall, L. (1993) Promoting the development of mentor teachers: theory and research programs using guided reflection, *Journal of Research and Development in Education*, 26(3), 179–185.
- Rest, J. (1979) *Development in judging moral issues* (Minneapolis, MN, University of Minnesota Press).
- Rest, J. (1993) *Guide for the Defining Issues Test* (Minneapolis, MN, Center for the Study of Ethical Development).
- Rest, J. R. & Narvaez, D. (Eds) (1994) *Moral development in the professions: psychology and applied ethics* (Hillsdale, NJ, Erlbaum).
- Rest, J., Narvaez, D., Bebeau, M. J. & Thoma, S. J. (1999) *Postconventional moral thinking: a Neo-Kohlbergian approach* (Mahwah, NJ, Lawrence Erlbaum).
- Rest, J., Thoma, S. & Edwards, L. (1997) Designing and validating a measure of moral judgment: stage preference and stage consistency approaches, *Journal of Educational Psychology*, 89(1), 5–28.
- Schlaefli, A., Rest, J. & Thoma, S. (1985) Does moral education improve moral judgment? A meta-analysis of intervention studies using the Defining Issues Test, *Review of Educational Research*, 55(3), 319–352.
- Shafer, J. (1978) The effect of Kohlberg dilemmas on moral reasoning, attitudes, thinking, locus of control, self-concept, and perceptions of elementary science methods students. Ph.D. thesis, University of Northern Colorado.
- Sirotnik, K. A. (1990) Society, schooling, teaching and preparing to teach, in: J. I. Goodlad, R. Soder & K. A. Sirotnik (Eds) *The moral dimensions of teaching* (San Francisco, CA, Jossey-Bass), 296–327.
- Snarey, J. (1985) The cross-cultural universality of social-moral development, *Psychological Bulletin*, 97(2), 202–232.
- Sprinthall, N. A. & Bernier, J. E. (1979) Moral and cognitive development for teachers, in: T. C. Hennessy (Ed.) *Value and moral education: schools and teachers* (New York, Paulist Press), 119–145.
- Sylwester, R. (1997) The neurobiology of self-esteem and aggression, *Educational Leadership*, 54(5), 74–79.
- Thies-Sprinthall, L. (1980) Supervision: an educative or miseducative process?, *Journal of Teacher Education*, 31(2), 17–30.
- Thies-Sprinthall, L. (1984) Promoting the developmental growth of supervising teachers: theory, research programs, and implications, *Journal of Teacher Education*, 35(3), 329–336.
- Thoma, S. J. (1986) Estimating gender differences in the comprehension and preference of moral issues, *Developmental Review*, 6(2), 165–180.
- Walker, L. (1991) Sex differences in moral reasoning, in: W. Kurtines & J. Gewirtz (Eds) *Handbook of moral behavior and development* (Hillsdale, NJ, Lawrence Erlbaum), 333–364.
- Wygant, S. A. & Williams, R. N. (1995) Perceptions of a principled personality: an interpretive examination of the Defining Issues Test, *Journal of Social Behavior and Personality*, 10(1), 53–66.
- Yeazell, M. I. & Johnson, S. F. (1988) Levels of moral judgment of faculty and students in a teacher education program: a micro study of an institution, *Teacher Education Quarterly*, 15(1), 61–70.
- Yost, D. S. (1997) The moral dimensions of teaching and preservice teachers: can moral dispositions be influenced? *Journal of Teacher Education*, 48(4), 281–292.

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