Dispositions to teach: Review and synthesis of current components and applications, and evidence of impact

Report to the Schooling Policy Group, Ministry of Education, Wellington, New Zealand

September 2014

John O'Neill, Sally Hansen & Evelyn Lewis

Massey University, Manawatū

Acknowledgements

Contents

Executive Summary

1. This report is a literature review of the use of "dispositions to teach" as entry criteria for Initial Teacher Education (ITE). The purpose was to identify the core components of dispositions to teach as they are applied to entrants into ITE in jurisdictions similar to New Zealand. The project was required to identify the ways in which dispositions to teach are measured and research evidence about the impact of dispositions to teach: (i) as entry criteria into ITE; (ii) on entry into the profession; and (iii) on student achievement (where possible).

2. Four major electronic databases were searched: Discover, ERIC, Scopus and Google Scholar. Relevant teacher education journals were also searched individually online. 147 results were saved for further full-text analysis. Whilst the landscape was dominated by the U.S., where there is a national requirement for ITE providers to assess candidate dispositions, other countries were represented. Google searches were used to access international government policies on teacher training, entry requirements to teacher training programmes and teacher association views on these issues.

3. Positions vary on the value and precision of the concept of "dispositions to teach". For example, one opponent describes dispositions as "an empty vessel that could be filled with any agenda". In contrast, one U.S. accreditation body defines them as "the values, commitments and professional ethics that influence behaviors towards students, families, colleagues and communities and affect student learning, motivation, and development as well as the educator's own professional growth".

4. A commitment to meet the needs of all students in increasingly diverse classrooms (economically, socially, culturally) is commonly regarded as a moral and ethical obligation for anyone who wishes to practise as a teacher today, and this is reflected in the way that dispositions are typically distinguished from teacher candidate "knowledge" and "skills". However, all three are conceptualised as mutually dependent in actual teacher candidate performances.

5. Despite several decades' development and usage of dispositions as entry, coursework and exit criteria in ITE in the U.S., significant conceptual and operational challenges remain. One writer summarises these challenges as: What is a disposition? How do we distinguish the dispositional from the non-dispositional? How are dispositions

identified? How do dispositions develop and change? Are dispositions descriptive statements that characterize an individual's behaviour or do dispositions cause behaviour?

6. Similarly, in the U.S. despite efforts to develop shared understandings and terminology, no common language currently exists that defines dispositions in a universally understood way. The literature includes a wide range of terms such as innate qualities, values, beliefs, ways of behaving, habits of mind, attitudes, and morals. Overall, there appear to be three general categories for conceptualising and defining dispositions: belief statements; personality traits or characteristics; and behaviours.

7. Particular dispositions have been reported to be associated with effective classroom teaching and learning by practising teachers. It is therefore commonly asserted that these same dispositions should be held by teacher candidates or developed during the course of their ITE programme. Equally, it is argued that candidates need to be provided with opportunities early in their programme to examine and challenge their existing, taken for granted beliefs. Unless such beliefs are challenged, it is argued that candidates are unlikely to consider new ideas, ways of thinking about students and pedagogical practices.

8. Much of the literature suggests that the focus on dispositions has arisen out of the recognition that in order to be effective, teacher candidates must possess more than knowledge and skills. They must also know how to apply and enact the knowledge and skills in ways that are sensitive to and effective for learners, that is, to have a professional identity.

9. The literature retrieved for this report produced very little empirical research that explicitly examines the relationship between teacher candidate dispositions and teacher candidate effectiveness or between teacher candidate dispositions and student achievement. There appears to be a paucity of empirical studies linking teacher dispositions with student outcomes. Some studies link teacher effectiveness with student achievement but not with dispositions per se.

10. One published review of 24 studies on the relationship between teacher candidate characteristics and performance, and student achievement found a strong correlation between student achievement and teacher interpersonal and intrapersonal dispositions, including teacher efficacy. A recommendation that resulted from the review was the

need to view dispositional development more holistically - as part of the obligation of a wider learning community rather than as stable traits held by the individual.

11. In England, the impact of Teach First candidates was evaluated by a team of researchers using a mixed-methods approach, including quantitative data on the impact of candidates on student achievement levels. The research team's general conclusion was that Teach First teachers are seen as having: excellent subject knowledge; high expectations of their students; and above average levels of self-efficacy. These appeared to be having a positive impact on student achievement.

12. The literature on assessment of dispositions reveals considerable diversity of theory, methods and tools. Some measures are based on indirect observable behaviours or performance. Some use a checklist approach. Some assess surface professional behaviours such as punctuality, appearance, poise and timeliness with assignments. Some measures focus on character and personality traits deemed to be necessary in order to be an effective teacher. Some work has been done in the area of self-assessment using: journaling, case studies and portfolios. Other approaches include the use of rubrics and the analysis of pre- and post-teacher candidacy essays. The Teacher Disposition Index is one quantitatively developed measure designed to be used at multiple stages and in a way that reflects dispositional growth throughout the ITE process.

13. A published review of summative evaluation instruments identified thirteen categories of most frequently assessed candidate dispositions: (a) acceptance of criticism, (b) critical thinking, (c) enthusiasm, (d) ethics, (e) leadership, (f) personality, (g) professional growth, (h) reflectivity, (i) relationships, (j) respect for learner, (k) self-confidence, (l) service to student; school and community and (m) work habits.

14. Caution needs to be exercised in judgments concerning the accuracy and precision with which dispositions may be assessed in both tertiary or experimental, and classroom or community settings. Despite the plethora of individual institutional efforts, there remains strong agreement in the literature that the lack of common definition and the complexity of the construct of dispositions continue to present considerable assessment challenges. No one measure has yet been developed that accurately captures teacher dispositions. This lack of clarity is used to justify questions about the validity and reliability of their assessment.

15. One of the most prolific writers in the field of candidate assessment proposes some key principles to promote a coherent approach to assessing dispositions at the level of

the ITE programme. Firstly, a teacher education programme should have a conceptual framework that presents a clear sense of values, commitments and professional ethics. Secondly, there needs to be recognition of the links between and among knowledge, dispositions and skills and an understanding that dispositions will deepen as teacher candidates develop. Thirdly, dispositions need to be assessed across the programme, over time, and using multiple methods. Finally, recognising the developmental nature of teacher candidate growth and the complex nature of teaching, assessment of dispositions should be done using qualitative and interpretivist approaches.

16. Some studies probe teacher candidates' motivation to teach and beliefs about teaching, as opposed to generic dispositions or personal qualities or virtues. One study recommended that greater emphasis is placed on recognition of the diverse motivational profiles and views about teaching that prospective teacher candidates have. Studies also highlight the disjuncture that can exist between a prospective candidate's view of teaching and the reality of teaching as a career. Another study highlighted the gap between aspiration and reality and the difficulty teacher candidates find in relating their own personalities and skills to the practice of teaching.

17. Other studies focus on candidates' attitudes or dispositions towards cultural diversity. One such study identified a relationship between candidates' background experiences and attitudes toward and comfort with conditions of diversity. Patterns of social interaction and social avoidance appeared to be related to attitudes and dispositions towards cultural diversity. This suggested the importance of enabling candidates to explore beyond what one researcher called the "comfort zone of the cultural status quo", for ITE curriculum experiences to be designed to support this, and for mentoring and customised practicum experiences to be provided. Other studies have led to the development of rubrics or taxonomies to identify different candidate dispositions and stages of development with regard to cultural diversity, for example in one study: "cross-cultural competence and ability to empower minority students", "multicultural worldview", and "knowledge of self".

18. Some studies focus on the development and assessment of moral judgment, critical thinking and reflection dispositions. Proponents argue that it is possible to assess these dispositions both through observation in practicum or internship settings and through structured assessment tasks. A common challenge to the assessment tasks approach is that it examines teacher thinking and not teacher behaviours. Similarly,

the normative assertion that teacher candidates should have a common set of values (and be assessed for these) is contested. For example, one study argues that moral judgement is multi-dimensional and that candidates should be allowed to use their own experiences from which to derive meaning of moral dilemmas and reveal their moral judgment rather than having to demonstrate the moral judgments they think initial teacher educators are looking for.

19. Very few studies explicitly addressed the assessment of dispositions during practicum, internship or community placements. One study attempted to develop a rating scale for personality characteristics that would be used in both coursework and fieldwork, and by both tertiary- and school-based teacher educators. School-based teacher educators reported that the statements were imprecise. The researchers consequently changed the focus of assessment from the characteristics of the *candidate* to the characteristics of *teaching*. The focus of the revised rating scale is predominantly developmental but has been used to contribute to decisions about continuation of candidacy.

20. Attempts have also been made to measure background characteristics of candidates and to link these with ITE programme candidate outcomes, to measure links between candidates' dispositional traits and their emotional states ("depression", "anxiety", "stress"), between personal values and dispositions, between personal traits and efficacy beliefs as a teacher, and between these traits and persistence in the classroom. While such studies have research promise in terms of adding to the knowledge base about what may be of value to ITE candidates, it is generally acknowledged both that further work is needed in this area and that there is no clear consensus on the links between prior life or career experience and performance as a candidate.

21. There appears to be general agreement in the research, professional and policy literatures that significant demographic differences persist between candidates and the students they are being prepared to teach. Put simply, candidates tend to be homogeneously white, middle class, female. Student populations in centres and schools tend to be increasingly heterogeneous (socially, economically, culturally). This means that ITE educators (who themselves may be largely homogeneous) need to be prepared carefully to develop the disposition to meet the needs of culturally diverse students. The literature provides multiple suggestions for supporting and challenging candidates but commonly emphasises the need for "programme-wide"

and "programme-deep" strategies to ensure that candidates develop appropriate understandings, strategies and commitments.

22. Much of the literature retrieved for this review is explicitly predicated on the view that teacher candidates can be supported to acquire or enhance desirable dispositions and/or reduce undesirable ones, provided that the ITE environments, experiences and relations they encounter are conducive, exemplary and reflective of the world of teachers' work. One study described how a theoretical framework for the ITE programme was developed to enable students to demonstrate "performances of understanding" through a wide range of coursework and fieldwork assessed tasks, each of which contributed different but complementary sources of evidence on the candidate's progress. In another, a common 24 item rubric with a four point scale was used across an ITE programme to: educate candidates about professional and behavioural expectations; encourage and support students early and throughout their ITE programme; and provide data to "signal if inappropriate students are in the programme".

23. Other approaches to the development of teacher dispositions include: service learning; observing and gathering data on teacher candidates' culturally responsive teaching in action in the classroom; providing a range of experiences (material resources, diverse internship experiences, interactions with diverse families, critical reflection, and discussion and dialogue) to early childhood candidates to encourage culturally responsive dispositions and practices; using Teacher Work Samples (unit goals and objectives, assessments lesson plans, analyses of student learning, descriptions of students and the community, and daily reflections) produced by candidates to develop a rubric around cultural competence; gathering "multiples of evidence" (survey, case response and classroom observation data) from candidates at various points in their programme "as a way to hear the candidate's thoughts about social consciousness"; individual and group reflection strategies (autobiography, biography, cross-cultural analysis/comparison, cross-cultural discussion, application in classrooms); helping candidates to regain a sense of motivation following a moment or period of "crisis" or disillusionment; coaching through feedback and self-assessment; support by mentors during teaching practica; micro-case scenarios; multicultural vignettes; written case studies and analysis of journals; and in depth-exposure to culturally relevant pedagogy.

24. What is notable about all these reports is the presence of a clear conceptual framework regarding the disposition and its development over time, an awareness of the learning trajectory and milestones that candidates need to experience, the relationships and activities that are needed to provide growth and performance opportunities, and appropriate assessment methods.

25. The literature shows that at present numerous assessment tools exist to gauge teacher dispositions on entry, during the programme, and at exit of teacher education programmes. Many, if not most, are institutionally specific and ambiguously defined in relation to "fitness for teaching".

26. Some institutions encourage potential candidates to self-assess their suitability for teaching using a validated disposition assessment measure. The institutions also use the results of the self-assessment as part of the admissions process and may require a "minimum score" for admission. This argument is based partly on the view that, given their limited resources, ITE providers should effectively "screen out" candidates who may struggle to acquire the required dispositions during their programme, or who would be considered to require large amounts of ITE staff support to do so. Such measures are commonly used in combination with academic transcripts, pre-enrolment guidance, interview, relevant prior experience and assessment tasks to arrive at an overall judgment regarding candidate suitability for entry.

27. Opponents of rigorous disposition screening for entry decisions argue that it assumes that candidates without the required dispositions can be prevented from entry, and that dispositions are fixed or stable traits that can be measured. These opponents typically argue that screening tools should be used to identify areas for growth and development, not exclusion. They also point to the possibility of candidate indoctrination, through the imposition of one preferred set of values or beliefs rather than the development of the candidate's ability to choose to make appropriate moral judgments and professional commitments.

28. It is important to acknowledge that candidates as well as providers make decisions about exit from ITE programmes. Researchers of candidates' reasons for withdrawing argue that their findings provide important information for ITE providers and policy makers on how they might better support candidates to completion (e.g. through careful workload management, choice of suitable mentors and appropriate practica placement).

29. More broadly, exit assessments by ITE providers may be used both to determine candidate success and evidence of the effects of programme pedagogies on candidates' dispositions. The literature contained occasional examples of each of these purposes. In the former, dispositions data were used as "sentinel" indicators to identify candidates who were potentially at risk and, in combination with other sources of evidence, to make decisions about progression or exit. In the latter, data about candidates' growth and development during the programme were used to inform reviews of curriculum, pedagogy and assessment components by ITE staff.

30. Most other jurisdictions that were reviewed for this report had identified the challenge of preparing candidates to meet the needs of diverse students as a significant policy priority. Diverse approaches were taken to identifying candidate dispositions as part of this.

31. The *rubric* approach is well-established in the U.S., whereby an accrediting authority mandates the assessment of candidate dispositions and provides a broad rubric for the purpose which is then interpreted and applied by each provider according to its "institutional ITE culture". *High academic entry standards* have been emphasised by several jurisdictions, most recently the U.K. and Australia, where higher literacy and numeracy standards have been specified and national tests developed, or are in preparation. *Psychometric or psychodynamic assessment* measures have been developed by individual institutions in the U.S. (e.g. University of Kentucky) and Australia (e.g. Melbourne University), and nationally in the U.K. where providers are required to assess "suitability to teach" prior to entry. The U.K. ITE peak body provides information on assessment of the criterion and provides links to several commercially available proprietary tests. *Alternative career pathways* to registered teacher status have also been developed in the U.K., with a view to attracting candidates whose previous career or life experiences are perceived to have provided the opportunity to develop particular dispositions suitable for teaching. Finally, *venture philanthropy* initiatives such as the Teach for All international network (of which Teach First NZ is a member) encourage high-performing undergraduates to view teaching as a CV-building, career and leadership development opportunity following graduation.

32. In conclusion, the majority of current components and applications of "disposition to teach" in other jurisdictions favour the view that dispositions (or at least pre-dispositions) can be identified, that they can be developed or (where the disposition is

regarded as undesirable) reduced to some degree during the course of ITE programmes, and that they are assessable.

33. A consistent theme across most or all Anglosphere jurisdictions is that student populations are becoming increasingly heterogeneous but that teacher candidate populations remain largely monocultural and middle class. Governments and officials wish to be assured that ITE programmes prepare candidates effectively to meet the needs of students in diverse classrooms. This challenge is seen to require candidates to have, or to develop, appropriate dispositions.

34. Some literatures regard these dispositions as pre-existing personality traits, others as the result of moral development in communities of teaching practice that are committed to social justice. The former lends itself to psychometric assessment, the latter to assessment for learning approaches.

35. Experience over two decades in the U.S. context is that the matching of desired disposition to sufficiently precise behavioural indicators and appropriate assessment methods and feedback-feedforward processes is one that takes years to develop effectively. However, the credibility of attempting to assess disposition to teach may well depend on this capability at ITE provider level.

36. Different experiences prior to ITE are seen to encourage the development of particular skills and qualities and some novel or alternative pathways into teaching target candidates who are believed to be more likely to hold those dispositions. Some providers and jurisdictions require evidence that candidates have minimum cognitive and non-cognitive dispositions, and there appears to be some emerging convergence on the desirability of using standardised instruments to assess disposition to teach at the point of entry, as part of a multi-method selection process.

37. As a result of this commissioned review, four major issues have been identified that really need to be considered and agreed across all stakeholders in the New Zealand context in light of developments elsewhere.

- What dispositions to teach are essential for the New Zealand context over the foreseeable future;
- Which cognitive standards and non-cognitive dispositions will be assessed at the point of entry to ITE, the instruments for these and nationally acceptable standards of entry;

- A pragmatic consensus on the range of methods through which essential dispositions may be developed and assessed, both during and on exit from ITE programmes; and
- Commitment to transparency and shared resource building for dispositions development among all ITE providers.

1. Introduction

In April 2014, the writers were commissioned by the Schooling Policy Group, Ministry of Education to review the use of "dispositions to teach" as entry criteria for Initial Teacher Education (ITE).[1] The project's purpose was to identify the core components of dispositions to teach as they are applied to entrants into ITE in jurisdictions similar to New Zealand. The project was required to identify the ways in which dispositions to teach are measured and research evidence about the impact of dispositions to teach: (i) as entry criteria into ITE; (ii) on entry into the profession; and (iii) on student achievement (where possible).

Further scoping discussions were undertaken with Schooling Policy staff. These confirmed that the final report should include case descriptions of policy enactment ("tools & methods") in jurisdictions similar to New Zealand, an overview of the theory of dispositions to teach, an analysis of empirical evidence of its effects on candidates and, where possible, on learners in schools. It was agreed that criteria for determining similarity to New Zealand would ideally include the presence of: a culturally diverse student population; priority groups of underachieving students; self-managing schools and early childhood settings; inclusive special educational needs provision; and recognition of the importance to educational success of family or whanau involvement.

In assessing the relevance of the identified dispositions to New Zealand, and any gaps in current ITE policy, links should be made where possible to the Graduating Teacher Standards, Tataiako the Cultural Standards, the Registered Teacher Criteria and the Code of Ethics for Registered teachers. Attention was to be given to the assessment of dispositions in the practicum setting. The report was also to be written in such a way as to promote further discussion and use in various government education business groups and agencies. These requirements have informed the pragmatic structure of the report and choice of section headings. We return to these substantive issues of applicability and transferability to the New Zealand context in the conclusion.

Given the timeframe and funding for completion of the review, it was agreed that the writers would follow only the main principles of conduct for systematic reviews (Evidence for Policy and Practice Information and Co-ordinating Centre [EPPI-Centre], 2007/2010), not their exhaustive quality assurance methods.

---

[1] Much of the text in this paragraph is reproduced verbatim from the Request for Service and Statement of Work documents written by the Ministry of Education.

2. Search, retrieval and selection

1. Four major electronic databases were searched: Discover, ERIC, Scopus and Google Scholar. Although Discover does search through ERIC, this search did produce additional articles not previously found.

2. A variety of search terms were used. The exact terminology used depended upon the database being searched. Search terms included (DE = descriptor; KW= keyword).

Descriptors	Keywords
Disposition	Teacher
Tendency	Student teacher
Inclination	Prospective teacher
Propensity	Candidate teacher
Predisposition	Student achievement
Character	Teaching quality
Proclivity	
Predilection	
Temperament	
Teacher disposition	
Teacher efficacy	

Truncations and wild cards were used to ensure that searches remained as wide and accurate as possible.

A data range of 2000 to 2014 was used in order to access the most up-to-date theory, research, policy and applications, mindful of the fact that "disposition to teach" entered policy discourse only relatively recently.

3. The majority of searches in Google Scholar produced useful results.

4. Relevant teacher education journals were also searched individually online: Action in Teacher Education, American Educational Research Journal, Assessment and Evaluation in Higher Education, Australian Journal of Education, British Educational Research Journal, British Journal of Teacher Education, Education Canada Magazine, Educational Review, Ethics and Education, Harvard Education Review, Interchange, Irish Educational Studies, Journal of Education for Teaching, Journal of Educational Psychology, Journal of Moral Education, Journal of Mathematics Teacher Education, Journal of Science Teacher Education, Journal of Teacher Education, Peabody Journal of Education, Research Papers in Education, Review of Research in Education, Sage Open, Scottish Educational Review, Teacher Development, Teacher Education Quarterly, Teachers and Teaching, Teaching and Teacher Education, Teaching Education, The Teacher Educator, The University of Wales Journal of Education, The Urban Review, The Clearing House: A Journal of Educational Strategies, Issues and Ideas, The Journal of Educational Research, Urban Education.

5. In total 147 results were saved for further full-text analysis, after which saturation point had been reached with no new information being found. Whilst the landscape was dominated by the U.S., other countries were represented.

6. Additionally Google searches were used to access government policies on teacher training, entry requirements to teacher training programmes and teacher association views on these issues. Specific countries investigated were Australia, Canada, Ireland, Scotland and the U.K.

7. Information from Australia and the U.K. indicated that the Teach For All programme and national variants could be of interest. Subsequent Google searches investigated this programme in Australia, the U.K. and the U.S.

8. The focus of the review was "dispositions to teach". Search descriptors and key words were limited to this focus. Other search terms related to the concept of "teacher quality" in the New Zealand policy context search terms (e.g. "adaptive expertise" "cultural competency") were excluded, as were conference proceedings.

9. Search strategies were agreed and search results were discussed by all members of the team. The 147 full-text items were reviewed independently in hard copy by the two principal authors. Items were selected for inclusion in the report on the basis that the item was in scope for the review and was substantively focused on dispositions to teach for ITE candidates. As a result, items that dealt with general teacher efficacy or competency, for example, were subsequently excluded. The reference list for the

report contains all items that appear in the text. The full search bibliography appears in the appendices.

The clearly delimited focus of this review means that the literatures on other knowledge, skills, qualities and competencies that may be relevant to the development of dispositions to teach among ITE candidates, would possibly benefit from further search and review (e.g. early childhood and secondary teaching, and teaching students with special educational needs). However, caution is needed to avoid "disposition" becoming a meaningless "catch-all" or proxy for other concepts, and as a result, impossible to measure or assess objectively.

The scholarly and professional literatures are not evenly distributed across jurisdictions. The U.S. literature predominates, partly because the U.S. was the first education system to introduce a requirement to assess ITE candidates' dispositions. This had effectively commenced as an intellectual project in the mid-1980s and emerged as a policy project in the early 1990s. There is, consequently, a well-established and vibrant "dispositions to teach" discourse in the U.S. in 2014.

The literature from other jurisdictions is more recent and, as such, fragmented, with research on dispositions appearing to be advanced by small numbers of interested individuals or groups of research-active teacher educators, commonly using small samples of candidates drawn from their own ITE provider institution.

There is, in the U.S. and other jurisdictions, very little sound evidence of either the effects of dispositions on teacher candidates, or on the students they teach. This intention of the review was not fulfilled.

Similarly, another intention of the review, to identify components from jurisdictions similar to New Zealand. The main similarity that appeared to concern all jurisdictions was to identify and encourage a disposition to meet the needs of diverse students.

Finally, the absence of universally or even generally agreed definitions, components and applications of "disposition to teach" in ITE mean that the review did not attempt to make meaningful links with the Graduating Teacher Standards, Tataiako the Cultural Standards, the Registered Teacher Criteria or the Code of Ethics for Registered teachers.

A list of database searches is included in Appendix one.

A bibliography of items selected from the database searches is included in Appendix two.

A list of websites from Google searches is included in Appendix three.

3. What are dispositions to teach?

> Dispositions is an empty vessel that could be filled with any agenda you want. (Gershman, 2005, n.p.)

> The values, commitments and professional ethics that influence behaviors towards students, families, colleagues and communities and affect student learning, motivation, and development as well as the educator's own professional growth. Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice. For example, they might include a belief that all students can learn, a vision of high and challenging standards, or a commitment to a safe and supportive learning environment. (NCATE, 2002, p. 53)

Although the term "teacher dispositions" has been present for several decades in the various research literatures concerning "teacher effectiveness", contemporary scholarly and professional literatures on "dispositions *to* teach" have been significantly shaped by two teacher education policy developments in the United States. First, the Interstate New Teacher Assessment and Support Consortium (INTASC) released a set of model standards (knowledge, skills and dispositions) for beginning teachers in 1992, which were eventually adopted by more than thirty states (Diez & Murrell, 2010a, p. 3). Second, the National Council for Accreditation of Teacher Education (NCATE) decided in 2000 (ratified in 2002) that initial teacher education (ITE) providers must in future assess teacher candidate *outcomes* in terms of knowledge, skills, dispositions and performance (Wise, 2006). (The original NCATE definition of dispositions appears in the indented quotation above.) An emphasis on dispositions would, it was argued, "necessarily lead to issues of a teacher's character and personality (i.e., his or her moral agency)" (Socket, 2006a, p. 7).

In the dispositions to teach literatures, a commitment to meet the needs of all students in increasingly diverse classrooms (economically, socially, culturally) is commonly regarded as a moral and ethical obligation for anyone who wishes to practise as a teacher today, and this is reflected in the way that dispositions are typically distinguished from teacher candidate knowledge and skills. However, all three are conceptualised as mutually dependent in actual teacher candidate performances.

Four major edited collections of papers on dispositions to teach (their conception, development, enactment and evaluation and the challenges posed by each of these), written by various interest groups of teacher educators, usefully map the field in the United States (Sockett, 2006; Borko, Liston & Whitcomb, 2007; Diez & Raths, 2007; Murrell, Diez, Ferman-Nemser & Schussler, 2010). (The searches did not identify any edited collections of papers from other jurisdictions, which suggests that the research and policy discourses may as yet be immature elsewhere.)

Members of the Task Force wrote the first of these, edited by Hugh Sockett and entitled Teacher Dispositions: Building a Teacher Education Framework of Moral Standards, on Teacher Education as a Moral Community of the American Association of Colleges for Teacher Education (AACTE). As its title implies, the task force was of the view that "the development of professional dispositions in a teacher is a process of moral education, given that teaching quality is primarily a moral, not technical, matter" (Sockett, 2006b, p. 9). Sockett's paper argues that dispositions comprise both "moral and intellectual virtues" (2006b p. 23):

> Intellectually, the teacher at least must be honest and accurate, say what he or she thinks, be consistent, and perhaps be brave. Morally, the teacher must be impartial, compassionate, and kind, without prejudice and with a great sensitivity to the child's needs and interests. (p. 23)

Sockett (2006b) argues that the dispositions teacher educators wish to develop must take into account the dispositions that they and *individual* candidates already have. He also argues that different moral perspectives (character, rules and relationships) emphasise different "primary dispositions" (p. 17). Dottin (2006) extends this in the second paper to consider the moral dispositions that professional teacher education *communities* need to develop to "guide the life of the unit" (p. 27) and the conduct of all those involved in the ITE enterprise. In other words, how do those who are collectively responsible for educating teacher candidates articulate "how life in the unit ought to be lived and how that life will enable students to acquire requisite habits of mind and moral sensibilities or dispositions" (p. 28)? In the third paper, Mary Diez (2006a) (consistently one of the most influential writers in the field) considers how the processes of articulating and developing dispositions need to be linked to "appropriate and meaningful processes to assess teacher candidates' dispositions" (p. 49), not superficial checklists that are "appropriated from a list and inserted in an otherwise

unchanged program" (p. 66). In short, the argument of these authors is dispositions comprise not just the personal intellectual and moral virtues that individual teacher candidates bring with them, but also the culture and life of the ITE provider in which desirable dispositions to teach are modelled and developed, and the assessment approaches that make them visible and amenable to demonstrations of performance and growth.

The second collection was a special issue section of the Journal of Teacher Education (published by Sage on behalf of AACTE), introduced with an editorial entitled *Apples and Fishes: The debate over dispositions in teacher education* (Borko, Liston & Whitcomb, 2007). The editorial noted the heated, often polarised, professional debate that had emerged around dispositions following the NCATE 2000 mandate and summarised the principled cases for and against dispositions. Advocates were reported to argue that dispositions "are essential to effective teaching", are "predictive of patterns of action" and "help to answer the question of whether teachers are likely to apply the knowledge and skills they learn in teacher preparation programs to their own classroom teaching" (p. 361). Proponents argue that their purpose is to "ensure that people who are licensed to teach will be committed to fostering growth and learning in all students. It is not to screen teachers on the basis of their social or political ideologies" (p. 361). Proponents acknowledge that "psychometrically sound measures" may not yet be widely available (p. 361) but that the need to develop "reliable, valid and fair measures" and to research the "relationship between dispositions and teacher effectiveness" (p. 361) should not prevent their use in the meantime.

Opponents reportedly argue that there is "no agreed-upon definition of the construct" and even that it is "inherently fuzzy and difficult", which mean, "dispositions cannot be measured reliably and validly" (p. 362).

> Without an operational definition or psychometrically sound measures, we cannot gather empirical evidence to determine the impact of teacher dispositions on student achievement. (Borko, Liston & Whitcomb, 2007, p. 362)

Opponents claim that the use of dispositions "runs the risk of supporting a social or political agenda of indoctrination" (p. 362) of teacher candidates.

The editors conclude, "arguments about dispositions draw upon two fundamentally different types of claims—those based on values and those based on empirical measurement" (p. 362) (hence the title of the editorial – apples and fishes). Elsewhere, Diez (2006b), makes a similar distinction:

… the literature on teacher education evaluation suggests a deep division between those who hold to the epistemology of intelligence and those who are engaging the epistemology of mind. The impact of the choice of one or the other is nowhere more clear and more important than in the assessment of dispositions. (p. 64)

The claims analysed in the rest of the Journal of Teacher Education collection explore: (i) the differences between dispositions defined as beliefs and attitudes, personality traits, observable behaviours and moral sensibility or professional ethics (Burrant, Chubbuck & Whipp, 2007); (ii) the utility of teacher candidate assessment based on clearly defined principles derived from the mainstream psychological construct of disposition (Damon, 2007); (iii) the tensions between fixed "entity" and developmental "growth" views of dispositions, between "separate" and "holistic" views of assessment of dispositions, and between their use for "screening individuals" versus "building a professional community" (Diez, 2007a); (iv) the lack of psychological meaning and explanatory value in the dispositions currently in use (Murray, 2007); and (v) the importance and practicality of assessing candidates' commitment to social justice (Villegas, 2007). Importantly, as the editors imply, approaches that give preference to values over observation and measurement, or vice versa, may simply be categorically different. Both are regarded as important elements of "dispositions" but may in practice be irreconcilable.

The third collection, *Dispositions in Teacher Education* (Diez & Raths, 2007), also acknowledges the ongoing disputes about the conception, use, assessment and development of dispositions in teacher education. The opening chapter (Freeman, 2007a) articulates a series of unresolved questions that still faced American teacher educators in the mid-2000s as they grappled with the NCATE rubric:

1. What is a disposition?
2. How do we distinguish the dispositional from the non-dispositional?
3. How are dispositions identified?
4. How do dispositions develop and change?
5. Are dispositions descriptive statements that characterize an individual's behavior or do dispositions cause behavior? (Freeman, 2007a p. 5).

Freeman identifies five distinct theoretical perspectives towards dispositions in the collection. Accordingly, dispositions may be viewed as: (i) a form of social cognition manifested in behaviour (Breese & Nawocki-Chabin, 2007); (ii) being consistent across the helping

professions, and may be identified, developed and assessed using perceptual psychology instruments (Wasciscko, 2007); (iii) capable of nurture and development across conceptual, ego and moral domains (Oja & Reiman, 2007); (iv) contextual processes that "manifest themselves in particular places at particular times and as a result it is virtually impossible to identify a priori the dispositions that enable to [sic] an educator to be effective" (p. 25) (Freeman, 2007b); or (v) forms of personal identity and integrity (Hare, 2007) which involve "seeing the development of teacher dispositions as following a series of discernments about the self in relationships to the role of the teacher" (Freeman, 2007a p. 25).

In both this volume and the one below, there is an increasing emphasis on the challenges of using dispositions in teacher education. In the third collection, according to Freeman, two major problems are identified: "how to assess the adequacy of the dispositions manifested by an individual educator and how to assist individuals in developing or reducing the power of disposition" (2007a, p. 26)

In the fourth collection, *Teaching as a Moral Practice: Defining, developing, and assessing dispositions in teacher education* (Murrell, Diez, Feiman-Nemser & Schussler, 2010), seven institutional cases of attempts to satisfy the NCATE requirement are reported, together with an introductory overview of the dispositions field and a concluding cross-case analysis by two of the editors (Feiman-Nemser & Schlusser, 2010). Feiman-Nemser and Schussler make the points that: (i) "conceptualizing dispositions is as much about a process as it is an end product" (p. 177). This is because, for the teacher *educators* it "includes the relational and intellectual work of developing a shared, moral vision within and across programs" (p. 177). Conceptualisation includes defining, enumerating and justifying the selected dispositions (p. 178); (ii) the lack of a shared definition of dispositions does not mean there are no commonalities across definitions used in the case study institutions. Half of the institutions emphasised the importance of social context, which suggests that ITE providers need to think carefully about the contexts they provide to enable candidates to develop the required dispositions; (iii) the inclusion of "an underlying moral aspect" (p. 180) to dispositions; and (iv) finally, and least common, a definition "that points to personality traits" (p. 180). However, none of the seven institutions:

> … view dispositions as static traits, resistant to change. Because they all address the
> development of dispositions at least to some extent, they acknowledge that dispositions

are malleable, capable of being cultivated within a teacher education program dependent on the learning opportunities that are provided. (p. 181)

In the U.S., the much cited early work of Katz and Raths (1985) conceptualised dispositions as an "ethos" or a way of being and living within a learning community. Katz and Raths were more concerned with specific kinds of actions and their frequency rather than a set of beliefs and attitudes. In terms of sector-wide practical efforts, the later 1992 INTASC set of model standards was based on the Alverno College ability-based conceptual framework (Diez, 1990). Diez's work with colleagues in the Alverno faculty was concerned with the "complex integration of skills, behaviour, knowledge, values, attitudes, motives or dispositions and self-perceptions" (Diez & Murrell, 2010a, p. 2). Diez and Murrell propose that dispositions are one's teaching stance, "a way of orienting oneself to the work and responsibilities of teachers" (Diez & Murrell, 2010b, p. 9). In this framework dispositions were seen as including sensitivity to learners as individuals, use of moral reasoning, and sense of responsibility for meeting learning needs.

Despite more than two decades of efforts to develop shared understandings and terminology in the US, no common language currently exists that defines dispositions in a universally understood way. The literature includes a wide range of terms such as innate qualities, values, beliefs, ways of behaving, habits of mind, attitudes, and morals. There appear to be three general categories for conceptualising and defining dispositions: belief statements; personality traits or characteristics; and behaviours (Burant, Chubbuck & Whipp, 2007). Taylor and Wasicsko (2000) define dispositions as the individual personal qualities or characteristics, such as attitudes, beliefs, interests, appreciations, and values. Other researchers such as Schulte, Edick, Edwards and Mackiel (2004) define dispositions as a frequently exhibited pattern of behaviour or habit of mind. Behavioural scientists such as Damon (2007) view a disposition as a psychological construct where traits or characteristics are embedded in individual temperament and dispose a person towards certain choices or behaviours. Stooksberry, Schussler and Bercaw (2009) suggest that dispositions act like a teacher's internal filter or compass affecting the way he or she is inclined to act in teaching contexts. Sockett (2009) proposes the idea of teacher dispositions as virtues attained as a result of "an individual's initiative, formed against obstacles and intrinsically motivated" (p. 292).

4. Why are dispositions important?

Teacher education recognizes that prospective candidates must possess more than pedagogical knowledge and skills. It is also imperative that candidates possess positive dispositions that affirm all students, as students respond favorably to this kind of relationship. The literature supports that diverse students who have caring relationships tend to be more motivated and perform academically. (Talbert-Johnson, 2006, pp. 156 & 157)

Particular dispositions have been reported to be associated with effective classroom teaching and learning. It is therefore commonly asserted that these same dispositions should be held by teacher candidates or developed during their ITE programme. Articulating these is important because "teacher educators must create ample opportunities early in the program for candidates to examine critically their taken-for-granted beliefs in relation to classroom actions" (Villegas, 2007, p. 374). Unless such beliefs are challenged, it is argued that candidates are unlikely to consider new ideas, ways of thinking about students and their pedagogical practices. Moreover, "the negative views of students of color held by many teacher candidates are highly problematic given the power of teacher expectations" (p. 374). In other words, explicitly addressing dispositions in the ITE curriculum and practicum enables "teachers-to-be [to be] helped to understand the connections between and among teacher beliefs about students, teacher actions in classrooms, and student outcomes" (p. 375)

Much of the literature suggests that the focus on dispositions for teaching has arisen out of the recognition that in order to be effective, teacher candidates must possess more than knowledge and skills. They must also know how to apply and enact the knowledge and skills in ways that are sensitive to and effective for learners, that is, to have a professional identity. Some describe this as the link between "knowing" and "being able to do" (Carroll, 2012 p.38). It is this third dimension or gap that the notion of dispositions is trying to fill. Much of the literature suggests that the desire to develop a sense of professional identity has been the key driver for the formation of the idea of dispositions to teach.

Garmon (2005) summarises a number of studies that suggest the dispositions that candidates bring with them to the ITE experience are important. His and others' research found that "students who began the course with a favourable disposition to diversity were more likely to

embrace the content being presented, whreas those entering with a less favorable disposition were less inclined to do so" (p. 276). This could be seen as an argument in favour of assessing candidates' prior beliefs and dispositions at the point of entry to ITE. However, Garmon also argues that "it is important for MCTE [multicultural teacher education] instructors to learn what students' entering conceptions are and then to devise suitable ways to effectively challenge them" (p. 283). This, he suggests, might require different approaches with different candidates. Against this educative view, he also notes that Martin Haberman and colleagues argue that candidates should "be selected on the basis of whether or not they already possess certain dispositions and experiences … or "appropriate *predispositions*" (p. 283) (emphasis added).

More broadly, Carr (2011) argues that qualities or virtues "such as sympathy, compassion, caring, empathy and personal example" (p. 174) are fundamentally important in teaching given its basis in the personal, interpersonal and social relations of the classroom. In this sense, dispositions are important because the teacher needs to exercise judgment in bringing together subject knowledge, procedural skills and what Carr calls "qualities of authoritative presence" (p. 175) in order to face and survive the multiple challenges of the contemporary classroom. Carroll (2012) asserts that dispositions are important because, "With student populations becoming increasingly diverse, teaching also calls for bridging numerous boundaries of linguistic, cultural, intellectual, physical, and socioeconomic differences. In addition, teaching is increasingly collaborative, calling for juggling professional interactions among colleagues" (p. 39). In the context of early childhood ITE, Baum and Swick (2008) emphasise the importance of candidates learning to value and support the cultural and social diversity of parents and families, empowering parents, engaging parents as partners and a commitment to effective communication with parents (pp. 580 & 581).

In contrast to arguments based in teacher effectiveness, professional praxis, ethics, cultural responsiveness or social justice literatures, there are also socially critical literatures that identify the politics of dispositions use in ITE. For example, in the English context, Stanfield and Cremin (2013) have identified "three 'ideal' types of teacher" used in recent policy texts since the emergence of Teach First and other alternative pathway ITE initiatives. These are the "Elite Graduate", the corporate "High Flyer" and the "Ex-Soldier". The authors argue that these ideal types, and the dispositions associated with each, have been constructed to support

the government's views of how it wishes the teaching profession to behave as delegated agents of government education reform policies (p. 26).

5. What is the relationship between teacher dispositions, teacher quality or effectiveness and student outcomes?

Links between teacher quality and student achievement indicators have been established particularly in teacher efficacy research with multiple studies indicating that particular teacher characteristics or behaviours do make a significant difference to student achievement. For example: a teacher's sense of efficacy was found to have a positive relationship with student achievement (Ross, 1992); Harme and Pianta (2001) found that students with significant behaviour problems in their early years were less likely to have problems later on in school if their teachers are sensitive to their needs and provide positive feedback frequently and consistently; Wheatley (2002) identified teacher persistence as a crucial dimension of effective teaching; and Shidler (2009) reported on the differential effects of two types of coaching models on teacher efficacy and student achievement, with the more effective being "coaching for instructional efficacy in specific content and teaching methods, directly facilitated by the coaches" (p. 453).

Generally, the literature retrieved for this report produced very little empirical research that explicitly examines the relationship between teacher candidate dispositions and teacher candidate effectiveness or between teacher candidate dispositions and pupil/student achievement. Indeed some, like Hess (2006) argue that "there is not a body of rigorous empirical evidence demonstrating that certain beliefs or dispositions improve teacher effectiveness" (cited in Borko, Liston & Whitcomb, 2007, p. 359). There appears to be a paucity of empirical studies linking teacher dispositions with student outcomes. A number of studies link teacher effectiveness with student achievement but not with dispositions per se.

A review of 24 research studies in teacher education undertaken by Jones and Jones (2010) examined the critical characteristics and performance of pre-service candidates relating to improving student achievement. They looked at what knowledge, skills and dispositions teacher candidates required to have an impact on student achievement. Using Coleman, Boyatzis and McKee's framework for emotional intelligence to classify teacher dispositions they identified a number of links between dispositions and student achievement. Their

analysis found a strong correlation between student achievement and teacher interpersonal and intrapersonal dispositions, including teacher efficacy. One of the recommendations that arose from their review was the need to view dispositional development more holistically as part of the obligation of a wider learning community rather than as stable traits held by the individual.

In a small-scale qualitative study with 19 teacher candidates, Shook (2012) investigated candidates' "dispositions to implement positive and proactive strategies for managing behavior" (p. 129) in primary school classrooms. The study relied on semi-structured interviews with the candidates and analysis of university supervisor observation reports that included behaviour management. The author reported that candidates used "rules and routines" and "relied on reactive or negative" strategies for managing behaviour but did not demonstrate a disposition to alter strategies to obviate behaviour problems (p. 129).

In England, the impact of Teach First teachers was evaluated by a team of researchers using a mixed-methods approach (Muijs, Chapman, Collins & Armstrong, 2010). A quantitative methodology was used to explore the impact of Teach First on student achievement levels. Whilst the results were not conclusive, the research team's general conclusion was that Teach First teachers are seen as having: excellent subject knowledge: high expectations of their students; and above average levels of self-efficacy. These appeared to be having a positive impact on student achievement. Data were gathered through a mix of methods in relation to teacher behaviours, attitudes and interactions with students. Dispositions were not tested for explicitly.

6. Can dispositions be assessed, standardised and measured?

In 2001 the U.S. National Council for Accreditation of Teacher Education (NCATE) mandated a set of standards that primarily addressed the need to "incorporate moral and ethical standards in the theory and practice of teacher education" (Sockett, 2006a, p. 7). The standards were developed to evaluate teacher performance with a focus on three dimensions: knowledge, skills and dispositions. The terms *knowledge* and *skills* are generally well understood but the term *dispositions* has proved more contentious and difficult to define and, therefore, to assess.

The NCATE (2001, 2006) provided a glossary definition that refers not only to dispositions as values, moral beliefs and attitudes but also to the behavioural tendency to be guided by them. It is this dual-purpose definition that has perhaps given rise to much of the contention and professional discourse around what dispositions actually are. Moreover, the NCATE definition does not specifically define what elements comprise target outcomes for teacher candidates. Without a common definition and explicit outcomes, some researchers such as Damon (2007) believe there is the potential to "legitimise an examination of the candidate's moral attitudes, beliefs and behavioural tendencies …. so that aspiring teacher candidates may be held accountable for their innermost beliefs and behavioural tendencies" (p. 368).

According to Damon (2007) the only way to guard against the corruption of such an approach is to have rigorous definitions of assessment standards with a set of accompanying principles for using and applying them. Damon offers a set of five underpinning principles to assist the setting of such standards (p. 368). These distinguish between acceptable (e.g. skills, knowledge and understandings for teaching; beliefs directly related to capacity and motivation to teach; personal characteristics essential to teaching) and unacceptable (e.g. attitudes and beliefs related to personal politics or religion; personal characteristics that are only distally linked to teaching competence) evaluations of teaching candidates (p. 368).

The NCATE accreditation requirements *require* ITE programmes to develop assessment devices for measuring candidate dispositions. As a result, multiple institutions have developed various measures independently but there is no one accepted global measure. Diez (2006b) identifies four questions about the assessment of dispositions.

1. Are dispositions stable traits or can teachers develop appropriate dispositions for teaching?
2. Are dispositions best assessed in particular ways?
3. Can the assessment of dispositions help to develop dispositions?
4. What should teacher education programs consider as they develop a plan to assess candidate dispositions? (pp. 64-70)

Methods of assessment

With regard to methods of assessment, Diez identifies four approaches/methods of assessment together with benefits and problems associated with each (Table 1).

TABLE 1. Possible Approaches to Assessment of Dispositions

Description of Method	Benefits	Issues/Problems
Psychodynamic: Give participants the same set of statements to respond to indicating their beliefs/dispositions; usually developed as a kind of Likert scale	Easy to do statistical research that compares everyone across a common set of statements; data can be aggregated easily (epistemology of intelligence)	• Assumes a set of right answers • Possible to "scam" the system, saying what you expect is wanted • Possible to answer honestly about one's current sense of the possible and be ruled out as a teacher candidate • Not contextualized, i.e., not tied to evidence in practice
Humanistic or existential: Give participants an open-ended response format question (in writing or interview) about what they believe/hold as dispositions	Allows participant to use own terms and thus may elicit responses not expected; respects the individual	• Possible to "scam" the researcher • Not necessarily contextualized • Required interpretation and judgement • Difficult to aggregate data
Behavioral (perspective of the candidate): Ask participants to express reflection in relationship to specific actions related to beliefs/dispositions, e.g., in developing a lesson/unit plan, how did they make decisions?	Expressions of belief/dispositions are tied to actual practice and thus are more likely to be "functioning" beliefs/dispositions; respects the individual (epistemology of mind)	• Difficult to "scam" the researcher • Because responses are contextualized and thus related to the practice of an individual, difficult to aggregate data • Requires interpretation and judgement
Behavioral (perspective of the candidate's students): In focus groups or interviews, ask the students of the candidate to describe how the candidate treats them	Kids' view of the behaviour of the candidate and how they infer his/her dispositions; comes from experience in context; can be aggregated	• Difficult for the candidate to influence • Influenced by how the questions are asked • May require interpretation and judgement

(Source: Diez, 2006b, p. 66)

Looking holistically at the assessment of dispositions literature across the period covered by the present search strategy (2000-2014), the diversity of theory, methods and tools is apparent, both in the U.S. and other jurisdictions. Some measures are based on indirect

observable behaviours/performance. For example, Taylor and Wasicsko (2000) created a disposition assessment tool used in Eastern Kentucky University, which is used to assess candidates both in the college/university classroom and in field settings. Other measures use a checklist approach such as The Early Childhood Education and Behaviours Checklist (Rike & Sharp, 2008) at the University of Memphis. Other measures (e.g. Notar, Riley, Taylor, Thornburg & Cargill, 2009) assess surface professional behaviours such as punctuality, appearance, poise and timeliness with assignments, as for example at Jacksonville State University. Some measures focus on character and personality traits deemed as necessary to be an effective teacher. The Teacher Dispositions Form (Stewart & Davis, 2009) developed at Arkansas University includes traits such as responsibility, dependability, creativity, and empathy. The Eastern Teacher Dispositions Index (ESTDI) at Eastern Connecticut State University has five scales (perceptions about self, about others, about subject field, the purpose and process of education, and general frame of reference perceptions) (Singh & Stoloff, 2008). Some work has been done in the area of self-assessment particularly with the use of: journaling (Schussler, Stooksberry & Bercaw, 2010), case studies (Wasicsko, 2000; Schussler & Knarr, 2013) and portfolios (Carroll, 2012). Other approaches to assessing dispositions include the use of rubrics (Wayda & Lund, 2005) and the analysis of pre- and post-teacher candidacy essays (Cosgrove & Carpenter, 2012). The Teacher Disposition Index (Schulte, Edick, Edwards & Mackiel, 2005) is a quantitatively developed measure designed to be used at multiple stages and in a way that reflects dispositional growth throughout the ITE process.

Young and Wilkins (2008) examined 32 student teacher summative evaluation instruments in an attempt to determine the most common dispositions evaluated by teacher education programmes. From the analysis of their data 13 disposition categories emerged (a) acceptance of criticism, (b) critical thinking, (c) enthusiasm, (d) ethics, (e) leadership, (f) personality, (g) professional growth, (h) reflectivity, (i) relationships, (j) respect for learner, (k) self-confidence, (l) service to student; school and community and (m) work habits. Three themed areas were found to be common across all evaluation instruments – professional behaviours, professional ways of thinking, and personality characteristics. Young and Wilkins suggest that the "use of these three themed areas may provide a conceptual understanding of dispositions and work to design assessment instruments that are more likely to measure these dispositions that positively impact student achievement" (p. 212).

Accurately assessing dispositions

Caution needs to be exercised in judgments concerning the accuracy and precision with which dispositions may be assessed both in experimental and naturalistic settings. A Ball State University study of the development of physical education undergraduate candidates' dispositions over three semesters, each involving a placement, illustrates the point. Ignico and Gammon (2010), developed a Professional Dispositions Assessment to permit candidate self-assessment and tutor assessment of ten professional behaviours using a four point rating scale. Evaluations took place in the final week of the teaching semester. The results showed that the student and tutor ratings were significantly different in each of the first two semesters, but insignificant in the third semester. The candidate self-ratings decreased "dramatically" (p. 93) between the second and third classes. The tutor ratings also decreased consistently across all three classes. The authors attribute declining tutor ratings to increased expectations of candidates as they progress through the programme, while "the significant decline in self ratings from Class A to Class C may be attributed to an improvement in self-awareness" (p. 93). The changing demands of the placement may also have been a contributing factor.

Despite the plethora of individual institutional efforts, there remains strong agreement in the literature that the lack of common definition and the complexity of the construct of dispositions continue to present considerable assessment challenges. No one measure has yet been developed that accurately captures teacher dispositions. This lack of clarity is used to justify questions about the validity and reliability of their assessment. For example, Welch, Pitt and colleagues (2010), in a study that used the 1973 Rokeach Value Scale to measure teacher candidate values and dispositions, conclude, "without a more complete definition of what dispositions are it is impossible to assess them" (p. 198).

For accurate assessment to be possible, they argue that, first, the specified dispositions need to be defined in terms of both values and "concomitant behaviors" (p. 198); second, to "identify behaviors that demonstrate teacher education candidates … have the disposition that all students can learn" (p. 198). (This was identified in their study as the most important of the NCATE requirements); and third, that a complete compilation of dispositions in use by ITE providers should be undertaken by those with knowledge of dispositions in order to provide a shared agenda for developing and assessing necessary dispositions. The authors advocate for a nationally consistent specification of associated behaviours and their

assessment, but with the opportunity for individual ITE providers to make a case for the use of local dispositions and associated teacher candidate behaviors, together with methods for their assessment.

Diez (2006a; 2007b) and Diez and Murrell (2010) provide comprehensive overviews of the assessment issues and tensions. Diez (2010) points out that global rating measures that are developed without links to evidence can be both unreliable and problematic. However, Diez does propose some key principles to promote a more useful approach to assessing dispositions. Firstly, a teacher education programme should have a clear conceptual framework that presents a clear sense of values, commitments and professional ethics. Secondly, there needs to be recognition of the links between and among knowledge, dispositions and skills and an understanding that dispositions will deepen as teacher candidates develop. Thirdly, dispositions need to be assessed across the programme, over time, and using multiple methods. Finally, recognising the developmental nature of teacher candidate growth and the complex nature of teaching, assessment of dispositions should be done using qualitative and interpretive approaches.

Motivation and beliefs about teaching

Some studies probe teacher candidates' motivation to teach and beliefs about teaching, as opposed to generic dispositions or personal qualities or virtues. For example, in the U.S., Thomson, Turner and Nietfeld (2012) used a typological approach to investigate what motivated prospective teacher candidate beliefs about teaching as a career. The study used cluster analysis to identify typologies of prospective teachers. The purpose of the study was two-fold: to explore teacher candidates' motivation (reasons) for teaching; and teaching profession, including beliefs about teaching and learning as well as gathering data from surveys and semi-structured interviews.

Data were also collected using two scales: The Reasons for Teaching Scale (RTS) and the Career Statement Scale (CSS). Findings from this study indicated that altruistic, intrinsic and extrinsic reasons for choosing teaching were all evident. Three clusters or typologies of motivation for and commitment to teaching were found. The largest cluster were "enthusiastic" candidates, so labelled because of their altruistic and intrinsic motivations and clearly expressed enthusiasm for teaching and "visionary actions" in the classroom (p. 328). The "conventional" cluster was also predominantly motivated by altruistic and intrinsic factors but rated professional opportunities (teaching can lead to other jobs, opportunities to

socialise with colleagues, good pay) lowest. In interview, this cluster also focused on "customary classroom teaching actions" (p. 328). The third cluster, pragmatic, were those who self-reported as least influenced by altruistic reasons and in interview mostly talked about "pragmatic aspects of teaching" (p. 328).

Thomson and colleagues recommend that greater emphasis is placed on recognition of the diverse motivational profiles and views about teaching that prospective teacher candidates have. They also highlight the disjuncture that can exist between a prospective candidate's view of teaching and the reality of teaching as a career.

Another study in England conducted by Younger, Brindley, Pedder and Hagger (2004) examined the emergent thinking of 36 teacher candidates' reasons for becoming teachers and their preconceptions of what being a teacher really means. Using initial interviews and starting points for discussion, Younger and colleagues highlighted the gap between aspiration and reality and the difficulty candidates may find in relating their own personalities and skills to the practice of teaching.

Cultural diversity[2]

Other studies focus specifically on candidates' attitudes towards cultural diversity. For example, Dee and Henkin (2002) conducted a quantitative study to assess pre-service teachers' attitudes/dispositions towards cultural diversity. The researchers were most concerned with "the extent to which students' input characteristics and experiences explain differences in attitudes toward, and levels of comfort with, conditions of diversity" (p. 24). Patterns of social interaction and social avoidance appeared to be related to attitudes and dispositions towards cultural diversity. Based on their findings, Dee and Henkin argue that in order to develop the appropriate skills, understandings (and dispositions) to work effectively with diverse student populations, student teachers must be willing to "explore beyond the familiar comfort zone of the cultural status quo" (p. 36). With regard to assessment of dispositions, Dee and Henkin suggest that information on dispositional status "can be useful in the construction of curricular responses to person-specific needs of prospective teachers so that they become better prepared to function effectively within culturally diverse environments" (p. 38). Similarly, Thomson and colleagues (2012) advocate "more individualized mentoring and provid[ing] different types of field experiences" (p. 333) to

---

[2] The challenges of cultural diversity identified in this section are further explored later in the report.

reflect the fact that teacher candidates have differing reasons for choosing teaching as a career and differing perceptions of the teaching profession (p. 332)

In an Australian qualitative study (Mills, 2009) compared the dispositions towards social justice of two cohorts of teacher education students from two different secondary ITE programmes. Interview data with four students, two beginning a one-year Graduate Diploma programme and two beginning their final year in 4th Year Bachelor of Education programme were analysed. The teachers belonging to the same cohort, and who had therefore completed the same courses, showed very different dispositions towards diversity and social justice. Furthermore, the data indicated that "deficit" models of social justice were prevalent in both cohorts. Mills argues that there is much more to dispositions towards diversity than the educative effects of teacher education. She suggests that given "we cannot focus on 'picking the right people', we need to find more effective ways to challenge values, attitudes and practices through intercultural support group and educational experiences" (p. 287). In other words, the potential pool of teacher candidates does not neatly divide into those who have all the desirable dispositions or pre-dispositions for teaching, and those who do not. Most candidates have a mixture of desirable dispositions and those which need to be challenged through education.

In a recent study, Mills (2013) drew on Gale and Densmore's (2000) conceptual framework on social justice and the theoretical work of Bourdieu to consider whether the development of student teacher dispositions towards social justice could be accelerated if practicum experiences were modified. Mills argues for a "radical reconsideration and subsequent re-structure of practicum – which could involve (1) a much closer relationship between coursework and practicum and an ongoing analysis of and reflection on how theory plays out in the classroom with regard to diversity, (2) working with supervising teacher to help pre-service teachers grapple with questions raised by diversity; and (3) a longer practicum component with a sustained emphasis throughout on teaching diverse students…" (p. 53).

Dee (2012) reports on a study at George Fox University, Oregon, where Teacher Work Samples (TWS) were used as a teacher performance assessment for evidence of cultural competence. The evidence of student teachers' cultural dispositions, reflections and lesson plans, a rubric was developed as a result of this study with four level categories reflecting a progression of cultural competence from static (no movement towards cultural competence) to reactive (reacts to issues of diversity at a simplistic or superficial level), to active (actively

engages with issues of culture, ethnicity and community values and traditions in planning and teaching), and proactive (anticipates the impact of each social, cultural and academic variable on unit planning). Each of the four categories represented unique characteristics which emerged from the data. Dee concludes that the whilst the rubric is a useful measure for assessing a student teacher's ability to plan for teaching for learning she remains unconvinced that TWS on their own could serve as a single measure of cultural competence and that teacher educators should instead use multiple ways to measure the cultural competence of pre-service teachers.

Fehr and Agnello (2012) used a Diversity Awareness Survey to measure pre-service teachers' preparedness, willingness and comfort when engaging with diverse classrooms. Using data generated from their survey, Fehr and Agnello developed a hierarchy of six developmental levels that they believe characterise pre-service teachers' responses in relation to awareness/knowledge, skills and dispositions. Ranging from level 1 (uncomfortable/negative/resistant/no meaningful answer/no answer) to level 6 (willing to promote transformation and social change/views teaching diverse students as a privilege) (p. 34).

Han (2013), a critical pedagogy teacher educator, reports on her attempts to develop teacher candidates' dispositions toward social justice literature in a literacy methods course in a remote ITE programme at Mountain University (a pseudonym). Han (2013) highlights issues concerning the development of critical consciousness among the candidates and concludes that she did not succeed in facilitating "serious thought" (p. 159) among her students and that for various reasons, they did not develop the critical consciousness that she had hoped for. Nevertheless, Han argues that with shifting demographics, the use of cultural pedagogies may be a valid way for teacher educators to alert teacher candidates to multicultural and social justice issues that otherwise might not form part of their existing "knowledge systems" (p. 143).

Thompson (2009) reports on a study which developed and validated a diversity awareness measure – the Multicultural Dispositions Index (MDI). The instrument was validated through a three year pilot study of 477 teacher and counsellor candidates and followed up with a five year main study of 1,092 students from the same Midwestern metropolitan university in the U.S. As a result of the pilot process the revised MDI comprised 22 claims based on three constructs: "(a) cross-cultural competence and ability to empower minority

students, (b) multicultural worldview, and (c) knowledge of self" (p. 96). Quantitative analysis confirmed that the items selected for the MDI can be assessed with an acceptable degree of validity and reliability. In this sense, Thompson suggests that the MDI gives teacher educators "a reliable and valid instrument to provide documentation and common language to communicate as they work together in the development, refinement, and assessment of multicultural educator dispositions" (p. 99).

Moral judgment, critical thinking and reflection

Some studies focus on the development and assessment of moral judgment, critical thinking and reflection dispositions. Schussler, Stooksberry and Bercaw (2010) in analysing disposition proposed a framework of three domains - intellectual, cultural and moral (ICM). They developed the ICM framework based on areas of the literature they viewed as essential for effective teaching: "teacher knowledge, including pedagogical content knowledge, culturally relevant pedagogy, and teacher moral development and care" (p. 352). Using the ICM framework as a heuristic they analysed teacher candidates' open-ended journals. One of the most significant findings from this analysis was the indication that "candidates who possessed the greatest awareness of their dispositions also had the greatest capacity to unpack their assumptions" (p. 361). Schussler and colleagues conclude that the ICM framework analysis produced some useful results but it only examined teacher thinking and not teacher behaviours.

McBride, Xiang and Wittenburg (2002) examined the critical thinking (CT) dispositions of pre-service physical education (PE) candidates using the California Critical Thinking Dispositions Inventory (CCTDI) developed by Faciorie and Faciorie. The seven subscales of the CCTDI include: truth-seeking, open mindedness, analyticity, systematicity, inquisitiveness, CT self-confidence and maturity. The overall analysis showed that the cohort of PE candidates appeared willing to think critically and solve problems. However, McBride and colleagues conclude that the most significant question of all is "even if pre-disposed to CT, will pre-service teachers in fact consciously *teach* for CT during their induction years and beyond?" (p. 39). There has been considerable attention given to the importance of reflection in teacher preparation. Giovanelli (2003) conducted a quantitative study to demonstrate that a reflective disposition towards teaching is related to effective teaching especially for instructional behaviour, classroom organisations and teacher expectations. The results indicated that with the exception of classroom management, each component of

effective teaching was associated with reflective dispositions. Despite the positive results, Giovanelli concludes by suggesting that there is still need for "much further testing" (p. 308).

Common values

The normative assertion throughout the literature that teacher candidates should have a common set of values is also open to question. For example, a study by Johnson (2008) that compared quantitative and qualitative methods of assessing teacher candidates' moral judgement found "inconsistency in the congruence" (p. 429) between the two measures, the first an updated version of the author's Defining Issues Test of moral judgement, and the second, the written assignments of 53 candidates in their senior internship semester on the topic of teachers' moral/ethical responsibilities, together with analysis of a video-recorded example of their own teaching. The reported incongruity of findings between the two measures led Johnson to make a number of recommendations for moral education in ITE programmes (p. 442). First, moral judgement is multi-dimensional and qualitative assessment rubrics need to be designed to accommodate this. Second, students should be allowed to "use their own experiences from which to derive meaning of moral dilemmas" and reveal their moral judgment rather than "having to parrot back what they think professors want to hear" (p. 442). In a separate study of three beginning teachers (Johnson & Reiman, 2007), the authors used the same updated quantitative test together with structured analysis of three recorded lessons by each beginning teacher, in combination with qualitative data gathered from "two cycles of assistance, a demonstration and an observation cycle, conducted by each mentor with his/her beginning teacher" (p. 680). In this instance, the authors reported a strong congruence between teacher judgments and actions, and also between the patterns of behaviour and judgment predicted by the quantitative data, and those found in the analysis of the qualitative data. While this research study clearly demonstrates that it is possible to accurately predict and assess the performance of moral dispositions by beginning teachers (as evidenced in their responses to moral dilemmas), the methods and tools required to do so appear resource intensive.

More significantly, perhaps, in terms of the development of desirable teacher dispositions, the three beginning teachers were all reported to "acknowledge the perspective of their learners, consider varying instructional methods, and self-assess the impact of their instruction" (p. 685), in other words to demonstrate desirable dispositions. Nevertheless "reasoning by the beginning teachers was centred on maintaining an established structure within their

classrooms and reducing ambiguity and uncertainty that often comes from a complex new role such as teaching" (p. 685). This finding arguably supports the view that, in the New Zealand context, the development of desirable classroom teaching dispositions would arguably need to be assessed over the full ITE period, both the period of candidature and the period of provisional registration.

Assessing dispositions during practica

Ng, Nicholas and Williams (2010) have reported how teacher candidates' beliefs change over time in response to experience and that the first practicum experience can act to dramatically change these. In response to the challenge of constructing a dispositions instrument with clearly defined indicators, Johnston, Almerico, Henriott and Shapiro (2011) conducted a study to develop an instrument with clear indicators during practicum/clinical experience. Items were developed from existing measures to create a questionnaire that had a list of indicators associated with field practice/dispositions. The scale development process led to the creation of a disposition assessment to be used with pre-service teachers in their field and internship experiences.

In another case, reported by teacher educators at California State University, the authors (Payne & Summers, 2008), report the development of a similar dispositions assessment rating scale using 36 "positive and negative personality characteristics" (p. 40), that was administered both in coursework and fieldwork. The initial response from teachers in the field indicated that the statements were vague and permitted subjective and biased judgment. A pre-requisite course was supposed to familiarise potential teacher candidates "with diverse student populations to which they may have had limited or no previous exposure" (p. 41). However, the university was located in a rural area with very little cultural diversity (See also Han, 2013). The authors report that this led to an over-reaction on the part of ITE programme staff:

> In their eagerness to build and maintain a quality program, faculty tended to overreact to the candidates' lack of experience with diversity, often interpreting ignorance as fear or ill will. In the course, candidates were asked to engage in various kinds of reflective writing and discussion. Occasionally, a potential candidate expressed thoughts and opinions that raised alarms about his or her ability to interact in appropriate ways with students. When this occurred, faculty would complete the disposition form to include

with the candidate's admission materials and lobby for rejection of the candidate. What developed was a negative intentionality on the part of program faculty. (p. 41)

The authors report the subsequent collaborative development of a dispositions rubric by university supervisors and public school teachers, which aimed to ensure that the dispositions were measurable: "The resulting rubric describes specific behaviors associated with each of the five dispositions at three levels of performance" (p. 42). In order to address the low diversity of the California context, a dispositions development process was initiated that focused on the characteristics of *teaching* rather than of the person. The focus on professional behaviours rather than on personality characteristics "inspired the development of a set of dispositions and an improved process for assessment (p. 41). Payne and Summers report that the development of the rubric led to a clearly defined process for "evaluating candidate dispositions at entry, advancement, and completion of the program" (p. 42). At the end of each teaching practicum, evaluations (by cooperating teachers, supervisors and candidates) are used to develop improvement plans for the candidate (p. 43), but there have also been instances of failure to improve against the required dispositions contributing to "dismissal" from the program (p. 43).

Meaningfully assessing dispositions

A useful summary of the challenges of assessing dispositions in ITE is provided by Diez (2006). She identifies four problems that challenge the credibility of teacher educators' efforts to assess teacher education candidate dispositions: reductionism; disconnectedness; superficiality; and compliance.

The first of these relates to the iterative relationship between the foci of teacher education programmes and teacher registration bodies, and is worth quoting at length given that in New Zealand there are multiple teacher and teaching "standards" (i.e. the Graduating Teacher Standards, Tataiako the Cultural Standards, the Registered Teacher Criteria and the Code of Ethics for Registered Teachers).

> When states and/or teacher education programs focus on standardization (as opposed to standards) in their assessment systems, reductionism is a real problem. Standardization means the same elements must be present in the evaluation of each candidate. Given the expense of evaluation systems, only a limited number of elements are likely to be included. And, given the demands of psychometric assumptions, those elements must lend themselves to straightforward judgment. Reductionism occurs when the evaluation

system goes for what is easiest to measure, rather than seeking to measure what is most critical even though it may be hard or expensive to measure. Too often, this results in an examination that serves as a "proxy" for things that might be really important. States are using tests of basic skills and content knowledge, for example, to test for readiness for teaching, recognizing that they are only part of what a teacher needs to know and be able to do to be successful in the classroom. (p. 61)

The key point being made by Diez is that meaningful assessment against standards is relatively expensive and time-consuming. The danger is that meaningful assessment of fewer standards may be sacrificed in favour of superficial coverage of a greater number of standards, and that work may be required to consolidate the various independently developed standards into a coherent and manageable whole.

Disconnectedness occurs, according to Diez, partly because of the conceptual separation of knowledge, skills and dispositions. The original INTASC rationale was that all three are important and therefore need to be assessed; most particularly in the way they came together in the teacher's performance in the classroom. But in practice this conceptual separation had led to separate or disconnected assessment systems for all three, and arguments that they must be assessed separately (p. 62). Instead, Diez gives an example of how INTASC envisaged the connected assessment of (beginning) teacher performance:

INTASC worked to develop a prototype assessment for beginning teachers, whose focus was on the evidence found in ten days of classroom practice, with accompanying lesson designs, videotapes, reflections, and analysis and feedback on student work leading to revision of planning over the course of the time period. (p. 62)

In other words, the ideal assessment of knowledge, skills *and* dispositions would be contiguous, focused on teacher performance in the classroom context and drawing on multiple sources of evidence over a teaching sequence of several weeks.

Diez' third question is about the best way to assess dispositions (see Table 1 above). She observes that there are strengths and weaknesses in each of the approaches, which leads to the conclusion that "as in all good research, triangulation of data sources would be a good idea for having confidence that the data about candidate dispositions is accurate" (p. 69). Her final question is about the issues that ITE providers need to consider in developing a plan to assess dispositions. Here she clearly favours a contextualised rather than a standardised approach,

within "a culture of assessment, using qualitative interpretivist approaches to look at each individual candidate's responses to the challenges of becoming a teacher" (p. 70).

Background characteristics and dispositions

Yet other studies focus on candidates' background characteristics and the correlations between these and programme outcomes. In Ireland, a recent longitudinal (2000-2007) statistical analysis of application and examination data by Heinz (2013) explored the rationale behind the use of academic and experimental criteria for selection into a second-level (postgraduate) ITE programme. The study investigated patterns of association between student teachers' background characteristics on entry to ITE programmes and their achievement in terms of final academic and teaching practice grades. In Ireland, for admission to a second level or Consecutive Professional Diploma in Education (PDE) course, candidates need to have their degree qualifications recognised by the Irish Teaching Council. Points are awarded for: their primary degree; additional relevant academic qualifications; and previous teaching experience. Based on findings from his study, Heinz contends that "in order to successfully attract and select more diverse and high quality applicants to initial teacher education, who will be able to meet the needs of all pupils in our increasingly complex school contexts, more innovative recruitment and selection strategies are necessary" (p. 111). Heinz suggests that the Irish selection criteria are too narrow and need to be broadened to include some indicators of "personal qualities, attitudes, cultural responsivity, and commitment to the teaching career" (p. 112).

Ripski, LoCasale-Crouch and Decker (2011) conducted a quantitative study that examined the two dispositional traits of *personality* and *adult attachment style* and three emotional states: *depression, anxiety and stress*. Their study also considered whether the qualities of pre-service teachers are similar to their age-group peers, if they remain stable over time, and whether they are predictive of their teaching behaviour with students. For this study, Ripski and colleagues looked for correlations between entry and exit data scores. Overall, pre-service teachers in this study reported more positive personality traits and emotions than their age group peers. Ripski and colleagues stress that the dispositions selected for this study may not be most important and that further studies may wish to focus on other dispositions such as emotional capacity, relationship style and so on, which may be important for their interactions with students. They also make the point that with the increase of alternative pathways to teaching, "it is important to determine whether there are dispositional or

emotional differences between individuals enrolled in education schools and those who select alternative teaching programs such as Teach For America.

A study undertaken by Welch, Pitts, Tenini, Kuelen and Wood (2010) used the Rokeach Value Scale to examine the relationship between teacher candidates' personal values and dispositions. The study explored the personal values and beliefs about students and learning with two groups – 125 experienced cooperating (associate) teachers and 99 teacher candidates undertaking clinical practice. The Rokeach Value Scale consists of a list of 18 terminal values and 18 instrumental values. Respondents were asked to rank each list of values from least to most important. Welch and colleagues acknowledge that the lack of a clear definition of dispositions is an impediment to developing an accurate assessment tool, teachers should have "a common set of values concerning the learners, their families and the profession" (p. 199). The analysis found that there was a significant relationship between the values in the scale and the dispositions in this particular ITE programme; that the most important instrumental values for the cooperating teachers were: "honest, responsible, loving, and helpful"; and that the dispositions of the "clinical interns" were similar to the co-operating teachers, although "happiness was more important to the younger teachers, whereas being helpful and respectful became more important as age increased" (p. 197). They conclude that specified dispositions should be defined both in terms of stated values and the concomitant behaviours that demonstrate that a candidate has these dispositions. "Once the necessary dispositions associated with teaching are identified, specific behaviours of teacher as effective professionals should be determined and assessed from a national perspective and not left to the determination of each individual program" (p. 199).

In Greece, a research study by Poulou (2007) examined factors that precede student teachers' efficacy beliefs and sense of connection for influencing instructional strategies, classroom management and pupil engagement. 198 teacher candidates from two education departments completed a Teacher Efficacy Sources Inventory and a Teachers' Sense of Efficacy Scale. The study was limited to examining personal teaching efficacy and measured the three dimensions of teaching efficacy on the Teacher's Sense of Efficacy Scale. Poulou found that self-perception of teaching competence, personal characteristics, and motivation for teaching contributed to teacher efficacy. This study further found that specific personality traits, capabilities and skills such as affection for pupils and a desire to improve teaching performance were significant personal motivating influences. Poulou concludes that teacher educators have a critical role in the enhancement of student teachers' efficacy beliefs.

In their paper *What makes a STAR teacher*? Hartlep and McCubbins (2013) report on a study that focused on teacher dispositions and core beliefs. Their study examined the potential relationship between dimensions of teachers' background characteristics using the Haberman Star Teacher Pre-screener as the assessment measure. Haberman defined Star Teachers as those who are so "effective that the adverse conditions of working in failing schools or school districts do not prevent them from becoming successful teachers" (Haberman, 2004, p. 53 cited in Hartlep & McCubbins, 2013, p. 6). The Star Teacher survey tool uses 50 multiple-choice items to assess 10 different attributes: persistence; organisation and planning; beliefs about the value of student's learning; approach to students; approach to at-risk students; ability to connect theory to practice; ability to survive in a bureaucracy; fallibility; explanation of student's success; and explanation of teacher success. Hartlep and McCubbins were keen to test the "professionalization" notion that teachers need professional and clinical knowledge of learning gained through study in a teacher preparation programme. They set out to explore "the likelihood that 'older' and 'more experienced' inservice teachers at a selective enrolment public school in Illinois would answer the Haberman Star Teacher Pre-Screener correctly" (p.2). Their small scale study looked at a sample of 31 licensed teachers who all self-identified as being white and over the age of 44. Potential relationships between dimensions of teacher dispositions, knowledge and skills on the Star Pre-Screener and teacher's background characteristics were examined. Two significant findings emerged from this study: Firstly, seasoned experienced teachers appeared to be more effective in the classroom as measured on the diagnostic Star Pre-Screener. The authors conclude from this that "teaching experience matters" (p. 14). Secondly, Licensed teachers (National Board Certified) were more likely to show persistence in the classroom. The authors conclude that "formal education might matter" (p. 14) but that further research on the impact of graduate ITE on teacher effectiveness is required.

7. What dispositions encourage cultural responsiveness and equitable practices?

The basic challenge is summarised in much the same way by many writers and continually referred to across education systems in developed countries.

Because these teacher candidates continue to be predominantly White, middle-class females, the gap between their cultural comfort zone and their students' cultural backgrounds is likely to continue. (Shandomo, 2010, p. 101)

How then do ITE programmes "bridge the gap"? Garmon (2005) notes that empirical research findings on the beneficial effects of multicultural teacher education (MCTE) courses and experiences are contradictory. Some efforts work, some do not. Wiggins, Follo and Eberley, for example, report a study which found that targeted, long-term field placement or practicum experiences improved the attitudes of candidates, even those with "little or no prior experience of culturally diverse communities" (2007, p. 653). On the basis of his own research, Garmon suggests that there are several key factors that make possible effective changes in ITE candidates' engagement with student and community cultural diversity.

These factors can be categorized into two broad categories: dispositions (referring to a person's character traits and tendencies) and experiences. The dispositional factors are openness, self-awareness/self-reflectiveness, and commitment to social justice. The experiential factors are intercultural experiences, educational experiences, and support group experiences. (Garmon, 2005, p. 276)

An earlier paper by Garmon (2004) reports a case study of the learning of one candidate, "Leslie", during one such course. His conclusion was that "even though prospective teachers may begin their teacher education program with the desired predispositions for learning about diversity, they still need to have actual experiences with individuals from different racial/cultural backgrounds" (p. 211), including, possibly, "some type of intense" training or "other meaningful intercultural experiences, perhaps as a condition for admission into the program" (p. 212). Similarly, Mills (2008) reviewed the research literature on ITE programmes and how they prepared to teachers to deal with student diversity. Her analysis was that diversity in ITE programmes is treated superficially and in fragmentary ways, and that in order to challenge "the 'deficit' construction of students from non-Anglo and lower socio-economic backgrounds common in the thinking of teachers" (p. 270), diversity and social justice issues needed to be central in ITE programmes and addressed systematically over a longer time frame. Later papers (Mills, 2012; 2013), based on an analysis of the experiences of a small sample of candidates in a three year secondary ITE programme, argue that choosing "the right people", who are predisposed to social justice perspectives may not be enough. This is because candidates need also to be supported by supervising teachers with

"recognitive dispositions towards social justice" (Mills, 2011 p. 269) as the candidates negotiate real school and classroom cultures with diverse students. In other words, candidates need to learn not only to critically reflect on and change their prior dispositions, but also to be given strategies and support as they do so. Mills reinforces this interdependence when she notes "dispositional change took place at the same time as [the two candidates] were developing competence as beginning teachers" (2013, p. 52). In another research study based on an analysis of candidates' autobiographical reflections, Mills and Ballantyne (2010) conclude that "these dispositions may develop in a sequential fashion from self-awareness/self-reflectiveness; moving towards openness; and finally a commitment to social justice" (p. 453).

In contrast, perhaps, Damon (2007), a psychologist, offers a more precautionary approach on the grounds that we have yet to define disposition sufficiently clearly. Therefore, he argues, it is important to assess only knowledge, skills and beliefs that are related to teaching: "It is not acceptable to assess attitudes and beliefs related to religious preference or political ideologies. For example, a candidate's belief systems regarding economic redistribution, the politics of multiculturalism, the implications of religious faith and its expression …" (p. 368). Villegas (2007) advocates strongly for the importance in candidates of a disposition to social justice and meeting the needs of all students but states that "dispositions cannot be assessed at entry" (p. 376) to the ITE programme, but through "performance in the program, including in their fieldwork and student teaching" (p. 376). A significant tension here is between those who advocate for the assessment of dispositions to teach that include personal characteristics, beliefs, qualities or behaviours (including past behaviours) in order to manage entry to or exit from ITE candidacy, and those who advocate for a more developmental approach that focuses largely on the requirements of teacher performance and the development of desirable dispositions as an integral feature of ITE candidacy.

Baum and Swick (2008) observe that ECE ITE programmes commonly provide candidates with "instruction regarding skills and strategies for working with families, but little else. Further, many of our teacher education exposures to family involvement are theoretical and lack real-life application" (p. 579). The authors argue that in order to develop the requisite dispositions (durable habits), teacher educators need to provide a conceptual framework to candidates so that they develop an understanding of how family dynamics and interactions between families and educators, influence students' experience of education. Teacher educators also need to provide opportunities for candidate self-examination in order to

"construct images of parents as active and important partners in their child's education" (p. 582). Such images can be encouraged through "authentic opportunities to listen to the 'voices' of parents and families" (p. 582) and providing students with a range of "experiential situations involving families" (p. 583).

Sherman (2006) also emphasises the importance of "engaged listening" by candidates as part of their "developing capacities to be responsive to students in multiple ways in a variety of contexts" (p. 41). She sees tensions between requiring candidates (and ITE providers) to work towards meeting prescribed standards of technical skills and procedure, as opposed to the moral dispositions "that are central to responsive teaching practice" (p. 45). McKinney and colleagues, among others, make the point that developing the capability to be responsive to the needs of diverse students takes time (McKinney, Haberman, Stafford-Johnson & Robinson, 2008). They compared candidate intern or practicum experience in two different urban settings. They concluded that even where the programme content and partnership school arrangements were of high quality, there was a need for earlier and more extensive experiences in urban settings to develop the necessary skills and dispositions among candidates.

> Even when the student interns were provided with the necessary knowledge, skills, attitudes and dispositions for working with urban at-risk students, a link could not be established with actual practice. (McKinney, Haberman, Stafford-Johnson & Robinson, 2008, p. 78)

Reinforcing the need for depth of exposure to responsive pedagogies, Fitchett, Starker and Salyers (2012) found that candidates taking social studies content who were "exposed to an in-depth culturally responsive teaching epistemology were more confident in their abilities to employ culturally relevant teaching practices" (p. 585), to work in diverse communities and "to teach multicultural social studies content" (p. 585). Anast Seguin and Ambrosio (2000) argue that a disposition for critical thinking, developed through the analysis of "multicultural vignettes" can help candidates "develop, demonstrate and apply necessary theories in the field" as is commonly done in the discipline of business studies (p. 10). However they caution, "since this is a written response of a possible action, and not observable teaching, the vignette assessment is limited to estimated performance" (p. 15). This obvious limitation would support the arguments of writers who advocate a deeper classroom exposure to ensure that new candidate knowledge and skills do develop into habitual actions or durable

dispositions. Similarly, perhaps, Shook (2012) investigated pre-service teacher dispositions for implementing positive and proactive behaviour management strategies. Findings from this study suggested that these pre-service student teachers planned and used rules and routines for general classroom management but did not demonstrate a disposition for altering management strategies to deal with behaviour problems.

8. How do teacher educators develop dispositions to teach in teacher candidates?

> … if we wish to help students develop new dispositions and habits, then we may need to craft learning environments so that their most stable and seemingly immutable of dispositions and habits no longer function as they did in the past. This means that we need to attend to the particularities of the ranges of experiences students have throughout their teacher education programs and carefully examine how all aspects of our programs overtly and subtly inspire and/or inhibit the potential development of intelligent habits and dispositions. Moreover, we must also analyze how our programmatic details respond to the experiences, beliefs, and habits that our individual students bring with them into our programs, again, to create contexts that nurture the development of the sorts of dispositions we advocate. (Nelsen, 2014, p. 7)

Much of the literature retrieved for this review is explicitly predicated on the view that teacher candidates can be supported to acquire or enhance desirable dispositions and/or reduce undesirable ones, provided that the ITE environments, experiences and relations they encounter are both conducive, exemplary and reflective of the world of teachers' work. However, the way in which these are provided by teacher education programmes, even under the same NCATE rubric, vary hugely. Two examples from the literature will illustrate the point.

Carroll's theoretical framework for developing dispositions is based on the observation that that "few teacher candidates pass smoothly and independently through the gauntlet of dispositional challenges in learning to teach" (2012, p. 39). Carroll argues that "dispositions must be understood as developing over time, influenced by context, integrated into the process of learning to teach, and emerging within professional communities" (p. 39). For Carroll, dispositions build on what candidates bring with them to ITE and are developed

through the provision of scaffolded teacher learning "performances of understanding" (p. 47). In other words, dispositions are developed and evidenced through "intellectual, cultural and moral actions" (p. 47). He lists these as "engaging with others in making sense of teaching practice; seeing connections, implications, relationships, and tensions among ideas; reading contexts of teaching and learning from a critical perspective; imagining or identifying practice to enact particular values and ideas; and interrogating one's own perspective" (pp. 48 & 49). This becomes the candidate's "repertoire of practice" (p. 62). Carroll then shows how this theoretical framework functioned in his teacher education practice by reporting in depth the learning experience of one candidate, "Brittany", as part of a longitudinal study of two cohorts of ten teacher candidates. He also provides examples of the assignment that were used for each "performance of understanding" (Table 2). The value of the Table is that it illustrates the importance of using a variety of assessment tasks in order to adequately sample the kinds of teacher candidate performances that provide evidence of learning and development of desirable dispositions. Notably, the assessment tasks range widely from the very abstract, to the very applied.

A contrasting approach was taken by Bradley and Jurchan (2013). They report a three year study undertaken in a Christian university, Azusa Pacific University, California, to develop an assessment rubric that would serve both the NCATE requirements and those of the California Standards for the Teaching Profession (CSTP). An initial version of the rubric based on these standards was developed and trialled by staff with one cohort of students. As a result of the data analysis, a list of criteria for measuring dispositions emerged which formed the basis for a more reliable measure. An initial set of observable behaviours reflecting a set of requisite dispositions was identified and a rubric was subsequently developed to measure the identified dispositions on a four point scale.

Bradley and Jurchan conclude that this method of assessment of dispositions assists in:

(i)   Educating teacher candidates about professional and behavioural expectations;

(ii)   Encouraging and supporting students early and throughout their ITE programme; and

(iii)   Provides data to signal if inappropriate students are in the programme.

TABLE 2. Designing Assignments as Performances of Understanding

Performance of Understanding	Sample Assignments
Exerting will or effort and working with stamina in learning to teach.	Journal assignments and other accounts of classroom experience.
Interrogating one's own perspective.	Personal perspectives assignment examining family culture (e.g., gender roles, use of leisure time, relationship to academic subjects, participation in activities and sports, sense of ethnicity, and relationship with money, class).
Having a commitment toward a personal vision of exemplary teaching practice.	Classroom learning culture inquiry investigating a classroom in terms of the curriculum/pedagogy, learning community, organization, management, and shared values; developing a personal vision of a classroom learning culture
Reflecting with insight and integrity both in the midst of and following practice.	Lesson plan formats and journal assignments; in-class discussions of teaching experiences with peers.
Imagining or identifying practice to enact particular values and ideas.	"Backwards design" (Wiggins & McTighe, 1998) unit planning assignments; Investigating teacher education standards inquiries exploring examples of practice in light of standards.
"Reading" contexts of teaching and learning from a critical perspective.	See classroom learning culture inquiry (above) and investigating teacher education standards inquiries (above).
Seeing connections, implications, relationships, and tensions among ideas.	Inquiry journals exploring curriculum planning; classroom learning logs connecting teaching and course ideas.
Acquiring and enacting a repertoire of practice with increasing flexibility and intentionality.	Extended internship experiences practicing the instructional cycle in the context of classroom life; Reflecting upon instructional decision making and adjustments in plans for teaching.
Relating to children and adults with an ethic of care.	Descriptive portrait of one child and his/her observable strengths and vulnerabilities as a learner, patterns of interaction, and recommendations for future support; Repeated experiences and expectations for collaboration with peers and mentors that blend collaboration with critical inquiry.
Engaging with others in making sense of practice.	Deliberate course work and practicum experience that position candidates among colleagues, negotiating the meaning of experience, designing and implementing plans for teaching, and reflecting upon practice.

(Source: Carroll, 2012, p. 60, Table 1)

The rubric is "intended to inform teacher candidates of the importance of establishing and maintaining appropriate dispositions" (p. 99). The disposition items themselves are quite

different from those in Carroll's conceptual framework, initially being a commitment to professional programme, positive attitude, class participation, professional character, attitude of service and ethical interaction and behaviour (p. 100). Later, based on workshops and discussions with interest groups and stakeholders, using assessment criteria from the Clinical Experience Rubric, the authors expanded the rubric to include items on timeliness, personal integrity/congruence, the belief that all students can learn, and fairness (p. 102). The final rubric comprised 24 assessment items in three areas, professionalism, teacher qualities and relationship with others. Discussions with users generated behavioural descriptors for each item. However, it is arguably the use of the rubric that most distinguishes it from the approach described by Carroll:

> Credential candidates received a copy and advisors reviewed and discussed the document with them face to face. At the conclusion of each course, instructors completed candidate [sic] and submitted them for review by the Program Directors. Additionally, the Dispositions Rating sheets are included in each class syllabus or on the class website so that candidates are kept aware of the expectations throughout their program. Candidates whose results indicated particular challenges were called in to meet with the Program Directors to discuss their match for the program. (Bradley & Jurchan, 2013 p. 100)

Other approaches to the development of teacher dispositions include: service learning as a pedagogical strategy to develop dispositions for urban teaching (Carter Andrews, 2009); systematic development, piloting and evaluation of the dispositions and behaviours of culturally responsive teaching by observing and gathering data on teacher candidates in action in the classroom (Hernandez, Morales & Shroyer 2013); providing a range of experiences (material resources, diverse internship experiences, interactions with diverse families, critical reflection, and discussion and dialogue) to early childhood candidates to encourage culturally responsive dispositions and practices (Kidd, Sanchez & Thorp, 2008); using Teacher Work Samples (unit goals and objectives, assessments lesson plans, analyses of student learning, descriptions of students and the community, and daily reflections) produced by candidates to develop a rubric "suggesting the placement of preservice teacher work on a continuum of development in the area of cultural competence" (Dee, 2012); gathering "multiples of evidence" (survey, case response and classroom observation data) from candidates at various points in their programme "as a way to hear the candidate's thoughts about social consciousness" (Katz, Hindin, Mueller, May & McFadden, 2008 p.

135) in order to provide cohort level feedback to the ITE staff to enhance their ability to create appropriate learning opportunities; individual and group reflection strategies (autobiography, biography, cross-cultural analysis/comparison, cross-cultural discussion, application in classrooms) (Lin & Lucey, 2010); helping candidates to regain a sense of motivation following a moment or period of "crisis" or disillusionment (Meijer, de Graaf & Meirink, 2011); coaching through feedback and self-assessment (Diez, 2007c); support by mentors during teaching practica (Moulding, Stewart & Dunmeyer, 2014); micro-case scenarios (Mueller & Hiindin, 2011); multicultural vignettes (Anast Seguin & Ambrosio, 2002); written case studies and analysis of journals (Schussler, Bercaw & Stooksberry, 2008a, 2008b; Schussler, Stooksberry & Bercaw, 2010) that progressively build self-awareness of candidates' moral development and allow them to "consider how their values and ideals translate into actions in specific contexts" (Schussler & Knarr, 2013 p. 84) and observe themselves and others doing so; and in depth-exposure to culturally relevant pedagogy (Fitchett, Starker & Sayers, 2012).

What is notable about all these reports is the underpinning presence of a clear conceptual framework regarding the disposition and its development over time, an awareness of the learning trajectory and milestones that candidates need to experience, the relationships and activities that are needed to provide growth and performance opportunities, and appropriate assessment methods. This might suggest that whatever ITE providers do to develop desired dispositions will work provided that the individual educators and their students engage in proven approaches. A necessary corrective to this atomised view is provided by Nelsen (2014) who, drawing on Dewey, describes dispositions as "clusters of habits" and that teacher educators need to work to develop "intelligent habits" among candidates (p. 1). This, he argues, calls for a more integrated approach by ITE providers and others.

> Beyond helping individual students and student teachers inquire into dispositions and their development, Dewy's discussion of dispositions and habits also pushes programs to investigate how their curricula, their assignments, their pedagogical choices, and myriad other program details connected to the very ethos of a program all lead to the development of certain dispositions and discourage others. As such, the whole notion of teacher dispositions can be employed as a complex reflective tool around which teacher education students, professors, and others in the educational process can conduct rich and meaningful inquiry. (p. 10)

9. How are dispositions used for entry to and exit from ITE programmes?

> Those who defend dispositions as having an important place in teacher education (in initial registration interviews and accreditation, for example) should argue for both less and more than the display of appropriate behaviors. *Less*, because they may well need to make judgments about candidates in anticipation of that behavior (in a pre-admission interview, for example); *more*, because they will be looking for evidence that candidates have a real understanding of dispositions (in general and in particular), their place in effective teaching, and the importance of such concepts as *intentionality* (both in themselves and in their future students). (Splitter, 2010, p. 213)

The literature shows that at present numerous assessment tools exist to gauge teacher dispositions on entry, during the programme, and at exit from teacher education programmes. Many, if not most, are institutionally specific and ambiguously defined (Jung, 2004, cited in Jung & Rhodes, 2008, p. 649) in relation to "fitness for teaching". Jung and Rhodes (2008) argue a case for broadening the disposition focus to incorporate *competence*-related dispositions as well as *character*-related dispositions.

On entry assessment

In response to the NCATE Standards for Accreditation, a number of institutions have tested and/or developed methods for attempting to assess dispositions as part of the admission process. For example, Wasicsko, Wirtz and Resor (2009) at Kentucky University piloted a perceptual rating scale for use in the admissions process with a sample of 2,000 undergraduate students. The Perceptual Admission Model allows candidates considering a particular career a structured opportunity to make self-assessments about their dispositional fit. Wasicsko and colleagues claim that their model provides potential teacher candidates the opportunity to self-assess regarding their fitness for teaching. Wasicsko (2007) argues that some dispositions are easier than others to teach to candidates.

> There is good evidence that *content knowledge* is among the easier elements to teach (as well as to measure) and *warmth* among the hardest to teach. Many question whether it is possible to teach [warmth, enthusiasm, commitment, energy, optimism, humour] or if it is reasonable to think that major changes in these characteristics can happen during the course of a 2-4 year program. (p. 70)

Wasicsko reports that only 3 to 5% of applicants are precluded from admission on the basis of their dispositions. Different admissions processes are used at undergraduate and graduate levels. At undergraduate level, admission follows three steps: 1) self-assessing and self-selecting (an introductory one hour course), (2) mentoring and counselling (a course involving lectures, four reflective exercises and a field placement involving a special needs student, and (3) admitting or deferring (deferring entry requires the applicant to provide evidence of having met the required disposition and is seen as less problematic legally than denying entry) (pp. 71-74). The graduate admissions process involves completion of two disposition related assignments and an interview, both of which are scored using the rating scale. In both pathways, minimum dispositions scores are required for entry. Wasickso reports that in light of the experience of struggling candidates, the minimum admission scores were subsequently raised.

A philosophically similar approach to Kentucky is reported at Henderson State University (Harrison, McAffee, Smithey & Weiner, 2006). A rubric for assessing dispositions is used for both entry and exit purposes as part of a wider assessment process that also involves questions designed to assess dispositions and training for public school and university interviewers to promote inter-rater reliability (p. 75). The university permits reapplication for candidates who are declined entry on the basis of the assessment. Once entered, all candidates are introduced to the six dispositions (caring for students and families, sensitivity to diversity, sense of fairness, sense of efficacy, personal reflection and sense of professionalism) and self-assess against these at two points in the programme (p. 76).

In response to NCATES's mandate for assessment of dispositions, Rike and Sharp (2008) report on the development and use of the Early Childhood Education Behaviours, Practicum Behaviours, Communication Skills and General Dispositions checklist. All students are rated on the checklist in three of their compulsory courses. The checklist appears to act more as a compliance tool rather than a developmental one. Rike and Sharp do agree that one of its uses is to modify inappropriate behaviours providing "documentation needed to effectively allow the faculty to perform their duties as gatekeepers" (p. 153).

In Canada, while entry to ITE is very oversubscribed and based on high academic entry standards, recent years have seen increased emphasis on non-academic entry criteria.

In many programs, strong consideration is given to non-academic factors such as background experience and evidence of interest in or disposition toward teaching, in addition to academic requirements. Frequently, applicants are required to provide written statements, letters of reference, proof of relevant work or volunteer experiences, and participate in interview processes in order to attempt to determine readiness or propensity to teach (Casey & Childs, 2007). Recently, there has been a movement toward recognition of non-classroom based experience in the admission process. It is believed that non-formal system experiences such as community service or leadership are as relevant to candidate preparedness for ITE. Programs weight the academic and non-academic factors quite differently, depending upon their admissions policies and program goals. Despite the fact that standardized admissions tests are not used in Canada, admissions requirements here appear to be significantly higher than has been reported in other countries (OECD, 2007). (Gambhir, Broad, Evans & Gaskell, 2008, pp. 12 & 13)

Diez and Murrell (2010b) highlight the tensions in using dispositions for ITE selection. They argue that the heavy emphasis that some institutions place on determining who should be admitted to ITE programmes is problematic because it is based on the assumption that through these measures, "teacher education programmes can avoid admitting candidates who lack the proper dispositions" (p. 20). It is also based on the view that dispositions are fixed traits that can be measured by screening instruments or methods. Diez and Murrell (2010b) do make a case that some institutions use the information about dispositions as stable traits gained at admission/selection to inform growth and development. However, they do warn against the danger of "*indoctrination* of candidates–imposing one set of values or beliefs with political undertones rather than the *formation* or *transformation* of candidates" (p. 19). They acknowledge the critical importance of assessing candidates upon entry with regards to police checks and background but claim that when entry assessment is used solely for screening out candidates who don't meet disposition requirements, "they stop well short of the expectations for moral and ethical practice" (p.19).

On exit and beginning teacher assessment

The literature searches conducted for this review identified very few reports that specifically linked the assessment of dispositions to teach to graduation or programme exit decisions, or

to early career teaching experiences. Partly driven by concerns about undesirable attrition rates during ITE programmes or in early career employment, research on the characteristics or dispositions of candidates, and reasons for their decisions to withdraw from ITE or employment is more commonplace.

It is important, then, to acknowledge that candidates as well as providers make decisions about exit. In an English study of why candidates withdraw from ITE programmes Hobson, Giannakaki and Chambers (2009) reported that candidates in employment-based schemes were less likely to withdraw than candidates in other routes, males were more likely to withdraw than females in primary (but in secondary there was no difference), and those over thirty five were more likely to withdraw than those under 25. Primary candidates were more likely to complete their programme than secondary. The reasons given for withdrawal were most frequently workload, changing their mind about teaching as a career, and lack of institutional support. When asked what would have helped them complete the ITE programme, the most frequent responses were more ITE provider support, more support from school mentors, and more manageable workload. (pp. 331 & 332). In their conclusion, the researchers identify differences between candidates who experienced problems and withdrew from the programmes and those who experienced similar problems but nevertheless completed (See also Malm, 2009). Hobson and colleagues say their findings "provide further evidence that student teachers' relationships with mentors and other teachers in their [ITE] placement schools tend to have a major bearing on the success or otherwise of that experience" (p. 334) and that many who withdraw "cite a lack of support from their ITE provider" (p. 334). In making recommendations the authors suggest that shorter ITE programmes may mitigate what appears to be widespread ITE workload problems,[3] that candidates are made more aware of the demands of ITE and the profession, that "they possess genuine, intrinsic motivations for wanting to become teachers and are sufficiently committed" (p. 335); that careful thought is given to the most appropriate sector and ITE pathway for their "interests, skills and needs" (p. 335); that support structures for candidates are in place and known by them; and that the prior experience, knowledge and skills of mature candidates and "career changers" are acknowledged and appropriately supported (p. 336).

---

[3] Some of which may simply be inevitable features of occupational acculturation, and others an imbalance between abstract and applied assessment tasks (See Carroll, 2012).

More broadly, exit assessments by ITE providers may be used both to determine candidate success and evidence of the effects of programme pedagogies on candidates' dispositions. Katz, Hindin, Mueller, May and McFadden (2008) emphasise the latter use and gather multiple sources of data over the four years of the programme. As has been noted elsewhere in this report, caution needs to be exercised in linking single source assessment data to decisions about whether and to what extent candidates may or may not possess required dispositions. Mills (2012) makes this point in comparing the final practicum experience of two candidates who both appeared to have demonstrated appropriate dispositions prior to the practicum. In this paper, Mills compares and contrast the experiences of two out of a sample of 12 candidates who agreed to participate in her study (from a total of 24 secondary teacher education candidates in two course pathways). Notably the two focus candidates had dissimilar experiences during the final practicum, one candidate being supported by a teacher and school setting conducive to social justice dispositions, the other not. Mills calls for more care and attention to the selection of university supervisors and cooperating teachers to ensure that they "will both model and support the equity pedagogy that socially just teaching requires" (p. 276).

Melin and Walker (2012) describe the use of a model at Northern Illinois University whereby course tutors assess candidate dispositions in all non-clinical courses. "The data are analysed and development plans are implemented to foster appropriate dispositions for teaching, student program progress, faculty instruction, and advisement activities" (pp. 59 & 60). Two tools are used, a dispositions rubric and a "status level system" (p. 60). In the former, "Candidates' performances are based on a dichotomous indicator of two ratings: *acceptable* and *alert*." (p. 60). In the latter, candidates at the first three of four levels "are considered to be in the process of developing appropriate dispositions, whereas candidates at level 4 are considered unacceptable and so must be recommended for a formal review by a faculty committee" (p. 60). The combination of rubric and "sentinel" indicators appears to have value in promoting continuous, guidance and monitoring (including self-monitoring) of candidate progress throughout the programme.

In a study of qualified early career teachers, Shidler (2009) examined the link between hours spent coaching teachers in the classroom for improving teacher efficacy in content instruction and in pupil achievement in reading outcomes, using two different models, one of which had a significant effect on student outcomes, while the other did not. The study could be taken to imply: (i) that the particular forms of support offered to candidates during practica may

markedly affect their ability to enact desired dispositions; and (ii) that the development of dispositions may continue during the early career phase. Whitsett, Roberson, Julian and Beckham (2007) also studied a sample of (52) first year teachers to establish their levels of development on certain dispositions. Three quarters of the way though their first year teaching, the least developed self-reported dispositions were "Acknowledging the importance of family, community, school, cultural and other contexts of learning" and "Demonstrating a willingness to extent [sic] 'reach' and repertoire" (p. 99). The most developed, self-reported dispositions were "Treating others with respect and fairness, Demonstrating a willingness to learn from others, and Demonstrating active concern for the progress of all learners" (p. 99), in other words, those dispositions most emphasised in the NCATE rubric. This appears to suggest that the NCATE dispositions may have some utility for early career teachers in helping to assess and self-assess their professional learning and growth.

10. Approaches to "disposition to teach" in other jurisdictions

The original intention for this report was that it should provide rich case descriptions of how dispositions to teach have been enacted in jurisdictions similar to New Zealand's. In the Anglosphere, at least, numerous examples from ITE providers in the U.S. context are available, mostly institutional, but some linked to state standards for beginning teachers. Beyond this, however, the field is sparse. Instead, then, the approach taken in this section is to report five different types of approach to enactment, based on real examples identified through the literature and subsequent Google searches. The approach we have taken is essentially a form of maximum variation sampling,[4] in order to illustrate the diversity or heterogeneity of approaches taken in other education systems.

This section of the report is intended to present an "up-to-the-minute" summary of approaches taken in other jurisdictions, including those currently in development. In our searches, we have been unable to find any independent reports on the initiatives concerned, in terms of their impact or efficacy.

---

[4] Maximum variation sampling aims to highlight the qualitative differences or diversity that exists within a phenomenon, in this case approaches to "disposition to teach". http://www.qualres.org/HomeMaxi-3803.html

1. Rubric

This is the "standards-based" approach taken in the U.S. whereby peak professional bodies and/or system level authorities mandate the essential dispositions that must be taken into account by ITE providers in the form of a rubric. The ITE providers have autonomy to develop their response to the rubric but are required to report on how they have done so and to provide evidence of the effects of their approach on teacher candidates. The dispositions rubric is one component of the overall standards. The ITE standards may also be linked to standards for beginning or established teachers.

http://ncate.org/Standards/UnitStandards/UnitStandardsinEffect2008/tabid/476/Default.aspx

http://intascstandards.net/

2. High academic entry standards

This approach is used at federal level in Australia and Canada and at national level in Ireland. More recently the U.K. government has also introduced higher literacy and numeracy standard requirements (in the form of Professional Skills Tests) for England and Wales as part of an initiative to attract more qualified candidates to teaching.

https://www.gov.uk/government/policies/improving-the-quality-of-teaching-and-leadership
http://www.education.gov.uk/sta/professional

This jurisdictional approach appears to be premised on the view that candidates who have demonstrated high academic achievement at school or undergraduate level will be more effective as classroom teachers than those who perform less well academically. As in Canada, there is a system level recognition of the increasing diversity of the student population and the fact that few teacher candidates are from minority populations but these jurisdictions have not yet developed policies or mandated requirements to assess the dispositions of candidates for suitability to teach diverse learners.

In Australia, federal requirements state the expectation that all teacher candidates' "personal levels of literacy and numeracy should be broadly equivalent to those of the top 30 percent of the population". A national test is in preparation for 2015.

http://www.aitsl.edu.au/docs/default-source/initial-teacher-education-resources/accreditation_of_initial_teacher_education_file.pdf

http://www.aitsl.edu.au/initial-teacher-education/literacy-and-numeracy-standards

In Ireland, the criteria and guidelines for accreditation of ITE providers require attention to the "attitudes, values and dispositions" expected of teachers in their Code of Conduct, but the Code itself does not use the term dispositions. Academic entry criteria for primary, secondary and mature candidates are specified.

http://www.teachingcouncil.ie/_fileupload/Teacher_Education/Final_Criteria_and_Guidelines_for_Existing_Progs_Aug2011.pdf

http://www.teachingcouncil.ie/_fileupload/Professional_Standards/code_of_conduct_2012_web_19June2012.pdf

http://www.education.ie/en/Education-Staff/Information/-New-Teachers/initial_teacher_education_CAO_entry.pdf

http://www.education.ie/en/Education-Staff/Information/-New-Teachers/Entry-Requirements-Professional-Master-of-Education-Professional-Masters-in-Education-Primary-Teaching-.pdf

http://www.education.ie/en/Education-Staff/Information/-New-Teachers/Entry-Requirements-Mature-Competition-2014.pdf

In Canada, the challenge of demographic mismatch between teacher candidates and those they will teach is recognised. However, the observation is made that entry to ITE in Canada is oversubscribed and highly competitive, and due to the perception that teaching is a valued and relatively well-remunerated career, qualified teachers may take up to eight years to gain a tenured position.

http://www.oise.utoronto.ca/ite/UserFiles/File/CharacterizingITE.pdf

3. Psychometric/psychodynamic assessment

In the U.S. the "perceptual inference" clinical approach to candidate assessment has been developed over several decades through the National Network for the Study of Educator Dispositions, based at the University of North Kentucky.

http://coehs.nku.edu/centers/educatordispositions/resources.html

The approach and its application at ITE provider level are comprehensively described by Wasicsko (2007). Wasicsko is a senior member of the National Network for the Study of Educator Dispositions, which promotes the use of a perceptual dispositions model based on

the concept of the effective teacher as an effective person (p. 61). The model is based on the position that it is possible to identify teacher candidates whose perceptual dispositions (perceptions of self; of students; of purpose; and of reference) make them unsuited to teaching and who are unlikely to be able to change these perceptions sufficiently during the course of an ITE programme (other candidates are regarded as having dispositions that may be developed through carefully selected curriculum and placement experiences). Validated scales have been developed and they are administered by trained assessors. The scales are used in combination with self-assessment, introductory lectures, assignment task completion and mentoring/counselling as part of the admissions process. Applicants who do not meet the admissions criteria are deferred rather than declined in order to minimise appeals. The process is more intensive for undergraduate than graduate applicants.

A broadly comparable online approach, with a different assessment focus, is being developed at the University of Melbourne Graduate School of Education, which is trialling the use of an online assessment tool, Teacher Selector. This permits self-assessment by potential candidates who are advised that the ITE provider for selection for entry will also use the results of the assessment. Those who are accepted into the programme are encouraged to use their personal results for development conversations with course tutors. The instrument assesses both cognitive ability and personality traits in four modules, is time-limited and requires up to 90 minutes for completion

https://www.teacherselector.com.au/mteach/

https://www.teacherselector.com.au/mteach/index/faq

In this regard, the Melbourne Graduate School of Education's approach reflects current discussions in the Australian policy context about how to identify candidates most suited to teaching and the personal qualities needed for teaching in addition to academic achievement.

http://www.aitsl.edu.au/initial-teacher-education/policy-initiatives

http://studentsfirst.gov.au/files/temag_issues_paper_-_april_2014_4.pdf

Recent U.K. developments are similar to those in Australia, with statutory guidance that ITE programmes are now required to have rigorous selection process to assess candidates' suitability to teach. This process is required to assess "personal qualities, attitudes, ethics and values". Information about a range of "non-cognitive assessment resources" is provided by the peak body together with links to a range of commercial personality tests that may be used.

http://webarchive.nationalarchives.gov.uk/20140107083009/http://www.education.gov.uk/schools/careers/traininganddevelopment/initial/b00209595/nca-itt-selection/nca-resources

For example, team Focus Limited offers two non-cognitive personality questionnaires. The 15FQ+ Personality Questionnaire measures openness, conscientiousness, extraversion, agreeableness and neuroticism. The Resilience Scales Questionnaire measures self-esteem, optimism, self-discipline, control and emotional non-defensiveness.

https://www.gov.uk/government/publications/initial-teacher-training-criteria

https://www.gov.uk/government/publications/initial-teacher-training-criteria-supporting-advice

http://www.teamfocus.co.uk/teacher-training-personality.php

http://www.teamfocus.co.uk/teacher-training-resilience.php

4. Alternative Career Pathway

In addition to the established university-led undergraduate and postgraduate ITE pathways, the U.K. government has established several targeted alternative pathways; each designed to attract candidates with particular experience, skills and attributes. These include an employment-based scheme (EBITT), employment or tuition fee incentivised School Direct schemes run by partnerships of schools, Premier Plus for high performing graduates in STEM[5] subjects, Troops to Teachers for those leaving the armed services and an Assessment Only (AO) pathway to Qualified Teacher Status (QTS). The U.K. government also actively promotes the philanthropically funded Teach First pathway.

http://webarchive.nationalarchives.gov.uk/20140107083009/http://education.gov.uk/get-into-teaching/teacher-training-options/school-based-training/school-direct.aspx

http://webarchive.nationalarchives.gov.uk/20140107083009/http://education.gov.uk/get-into-teaching/premier-plus.aspx

http://webarchive.nationalarchives.gov.uk/20140107083009/http://education.gov.uk/get-into-teaching/troops-to-teachers.aspx

http://webarchive.nationalarchives.gov.uk/20140107083009/http://www.education.gov.uk/get-into-teaching/teacher-training-options/experienced-teachers/assessment-only.aspx

---

[5] science, mathematics, engineering and technology

http://webarchive.nationalarchives.gov.uk/20140107083009/http://education.gov.uk/get-into-teaching/teacher-training-options/school-based-training/teach-first.aspx

5. Venture Philanthropy

As in the U.K. example above, a number of jurisdictions, including New Zealand, offer local variants of the Teach for America/Teach for All pathway into teaching. This global philanthropically-funded initiative explicitly targets high performing graduates and is niche-marketed as offering a leadership development programme and CV-building opportunity in return for commitment to work as a teacher in an employment based training scheme in a disadvantaged school for a minimum number of years. In the U.K. example (links below), recruitment involves an online application process followed by an invited assessment centre experience. "Hints and tips" are provided for the application form and assessment centre experience.

http://teachforall.org/

http://teachforall.org/our-network-and-impact/national-organizations

http://graduates.teachfirst.org.uk/recruitment/requirements/index.html

http://graduates.teachfirst.org.uk/recruitment/selection-process/assessment-centre.html

http://graduates.teachfirst.org.uk/recruitment/selection-process/tips.html

Teach for Australia follows a similar marketing and recruitment approach.

http://teachforaustralia.org/content/recruitment-selection

11. Conclusion: Lessons for Aotearoa New Zealand policy

Despite the lack of universality, our reading of the literature is that the majority of current components and applications in other jurisdictions favour the view that dispositions (or at least pre-dispositions) can be identified, that they can be developed or (where the disposition is regarded as undesirable) reduced to some degree during the course of ITE programmes, and that they are assessable. While the research literature (mostly written by teacher educators) appears to have reached a consensus on the importance of being able to measure teacher candidate dispositions, and has made progress towards this using diverse approaches,

there is little evidence that the development or reduction of particular dispositions in teacher candidates has been associated empirically with higher rates of success (participation, engagement, achievement) among their students in classrooms.

A consistent theme across most or all Anglosphere jurisdictions is that student populations are becoming increasingly heterogeneous but that teacher candidate populations remain largely monocultural and middle class. Governments and officials wish to be assured that ITE programmes prepare candidates effectively to meet the needs of students in diverse classrooms. This challenge is seen to require candidates to have, or to develop, appropriate dispositions.

Some literatures regard these dispositions as pre-existing personality traits, others as the result of moral development in communities of teaching practice that are committed to social justice. The former lends itself to psychometric assessment, the latter to assessment for learning approaches. In their purest forms, the former focuses on what the individual brings to the ITE experience, the latter on what the ITE experience can provide for individuals. In reality, many ITE providers use an eclectic mixture of selection, teaching and assessment methods in a range of tertiary and field-settings, in the best cases carefully matching performance contexts to the developmental readiness of the candidate. Experience over two decades in the U.S. context is that the matching of desired disposition to sufficiently precise behavioural indicators and appropriate assessment methods and feedback-feedforward processes is one that takes years to develop effectively. However, the credibility of attempting to assess disposition to teach may well depend on this capability at ITE provider level. In the U.S. context, this knowledge has been acquired through trial and error at the institutional and network levels. It is a moot point whether such an approach would be beneficial in a small country such as New Zealand, or whether a collaborative approach across institutions would be more helpful.

Different experiences prior to ITE are seen to encourage the development of particular skills and qualities and some novel or alternative pathways into teaching target candidates who are believed to be more likely to hold those dispositions. Some providers and jurisdictions require evidence that candidates have minimum cognitive and non-cognitive dispositions, and there appears to be some emerging convergence on the desirability of using standardised instruments to assess disposition to teach at the point of entry, as part of a multi-method selection process. This is both to ensure that the most appropriately disposed candidates are

selected and to avoid expending time and resources on candidates who would need extraordinary levels of support to meet the required disposition standards. However, there is little in the literature we have reviewed to suggest consensus on what is the minimum acceptable level of performance, or combination of scores, on the many psychometric assessments that are available.

In the New Zealand context, where the average age of the teacher workforce is high relative to other occupational groups, this issue of minimum acceptable standard is likely to prove acute in coming years as a greying professional cohort of teachers retires and is replaced. Notwithstanding, we see four major issues that really need to be considered and agreed across all stakeholders in the New Zealand context in light of developments elsewhere.

- What dispositions to teach are essential for the New Zealand context over the foreseeable future;
- Which cognitive standards and non-cognitive dispositions will be assessed at the point of entry to ITE, the instruments for these and nationally acceptable standards of entry;
- A pragmatic consensus on the range of methods through which essential dispositions may be developed and assessed, both during and on exit from ITE programmes; and
- Commitment to transparency and shared resource building for dispositions development among all ITE providers.

References

Anast Seguin, C., & Ambrosio, A. L. (2002). Multicultural vignettes for teacher preparation. *Multicultural Perspectives, 4*(4), 10-16. doi: 10.1207/S15327892MCP0404_3

Baum, A., & Swick, K. (2008). Dispositions toward families and family involvement: Supporting preservice teacher development. *Early Childhood Education Journal, 35*(6), 579-584. doi: 10.1007/s10643-007-0229-9

Borko, H., Liston, D., & Whitcomb, J. A. (2007). Apples and fishes: The debate over dispositions in teacher education. *Journal of Teacher Education*(5), 359-364. doi: 10.1177/0022487107309977

Bradley, A. P., & Jurchan, J. (2013). Dispositions in teacher education: Complex but comprehensible. *Education, 3*(1), 98-104. doi: 10.5923/j.edu.20130301.13

Breese, L., & Nawrocki-Chabin, R. (2007). Social-cognitive perspective in dispositional development. In M. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 31-52). Charlotte, NC: Information Age Publishing.

Burant, T. J., Chubbuck, S. M., & Whipp, J. L. (2007). Reclaiming the moral in the dispositions debate. *Journal of Teacher Education*(5), 397-411. doi: 10.1177/0022487107307949

Carr, D. (2011). Values, virtues and professional development in education and teaching. *International Journal of Educational Research, 50*(3), 171-176. doi: 10.1016/j.ijer.2011.07.004

Carroll, D. (2012). Examining the development of dispositions for ambitious teaching: One teacher candidate's journey. *New Educator, 8*(1), 38-64. doi: 10.1080/1547688X.2011.619950

Carter Andrews, D. J. (2009). "The hardest thing to turn from": The effects of service-learning on preparing urban educators. *Equity & Excellence in Education, 42*(3), 272-293. doi: 10.1080/10665680903060261

Cosgrove, M., & Carpenter, B. (2012). Value-added measures of teacher candidates' dispositions. *SRATE Journal, 22*(1), 1-7.

Damon, W. (2007). Dispositions and teacher assessment: The need for a more rigorous definition. *Journal of Teacher Education*(5), 365-369. doi: 10.1177/0022487107308732

Dee, A. L. (2012). Evidence of cultural competence within teacher performance assessments. *Action in Teacher Education, 34*(3), 262-275. doi: 10.1080/01626620.2012.694785

Dee, J. R., & Henkin, A. B. (2002). Assessing dispositions toward cultural diversity among preservice teachers. *Urban Education, 37*(1), 22-40. doi: 10.1177/0042085902371003

Diez, M. (1990). A thrust from within: Reconceptualizing teacher education at Alverno College. *Peabody Journal of Education, 65*(2), 4-18.

Diez, M. (2006a). Assessing dispositions: Five principles to guide practice. In H. Sockett (Ed.), *Teacher dispositions: Building a teacher education framework of moral standards* (pp. 49-68). Washington: AACTE.

Diez, M. (2006b). Assessing dispositions: Context and questions. *New Educator, 2*(1), 57-72. doi: 10.1080/15476880500486137

Diez, M. (2007a). Looking back and moving forward: Three tensions in the teacher dispositions discourse. *Journal of Teacher Education*(5), 388-396. doi: 10.1177/0022487107308418

Diez, M. (2007b). Assessing dispositions: Context and questions. In M. E. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 183-202). Charlotte, NC: Information Age Publishing

Diez, M. (2007c). The role of coaching in working with dispositions. In M. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 203-218). Charlotte, NC: Information Age Publishing.

Diez, M., & Murrell Jr, P. C. (2010a). Introduction. In P. C. Murrell Jr, M. E. Diez, S. Feiman-Nemser, & D. L. Schussler (Eds.), *Teaching as a moral practice: Defining, developing and assessing professional dispositions in teacher education* (pp. 1-6). Cambridge, Mass: Harvard Education Press.

Diez, M., & Murrell Jr, P. C. (2010b). Dispositions in teacher education - starting points for consideration. In P. C. Murrell Jr, M. E. Diez, S. Feiman-Nemser, & D. L. Schussler (Eds.), *Teaching as a moral practice: Defining, developing and assessing professional dispositions in teacher education* (pp. 7-26). Cambridge, Mass: Harvard Education Press.

Diez, M., & Raths, J. D. (2007) *Dispositions in teacher education* (pp. 183-202). Charlotte, NC: Information Age Publishing.

Dottin, E. S. (2006). A Deweyan approach to the development of moral dispositions in professional teacher education communities: Using a conceptual framework. In H. Sockett (Ed.), *Teacher dispositions: Building a teacher education framework of moral standards* (pp. 27-48). Washington: AACTE Publications.

Fehr, M. C., & Agnello, M. F. (2012). Engaging in diverse classrooms: Using a diversity awareness survey to measure preservice teachers' preparedness, willingness, & comfort. *Multicultural Education*(2), 34-39.

Feiman-Nemser, S., & Schussler, D. L. (2010). Defining, developing, and assessing dispositions: A cross-case analysis. In P. C. Murrell Jr, M. Diez, S. Feiman-Nemser, & D. L. Schussler (Eds.), *Teaching as a moral practice: defining, developing and assessing professional dispositions in teacher education* (pp. 177-201). Cambridge, Mass: Harvard Education Press.

Fitchett, P. G., Starker, T. V., & Salyers, B. (2012). Examining culturally responsive teaching self-efficacy in a preservice social studies education course. *Urban Education, 47*(3), 585-611. doi: 10.1177/0042085912436568

Freeman, L. (2007a). An overview of teacher dispositions in teacher education. In M. E. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 3-30). Charlotte, NC: Information Age Publishing.

Freeman, L. (2007b). Teacher dispositions in context. In M. E. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 117-138). Charlotte, NC: Information Age Publishing.

Gambhir, M., Broad, K., Evans, M., & Gaskell, J. (2008). *Characterizing initial teacher education in Canada: Themes and issues* Retrieved from http://www.oise.utoronto.ca/ite/UserFiles/File/CharacterizingITE.pdf

Garmon, M. A. (2004). Changing preservice teachers' attitudes/beliefs about diversity: What are the critical factors? *Journal of Teacher Education*(3), 201-213. doi: 10.1177/0022487104263080

Garmon, M. A. (2005). Six key factors for changing preservice teachers' attitudes/beliefs about diversity. *Educational Studies, 38*(3), 275-286. doi: 10.1207/s15326993es3803_7

Gershman, J. (2005). *'Disposition' emerges as issue at Brooklyn College*. Retrieved from http://www.nysun.com/new-york/disposition-emerges-as-issue-at-brooklyn-college/14604/

Giovannelli, M. (2003). Relationship between reflective disposition toward teaching and effective teaching. *The Journal of Educational Research*(5), 293-309. doi: 10.1080/00220670309597642

Han, K. T. (2013). 'These things do not ring true to me': Preservice teacher dispositions to social justice literature in a remote state teacher education program. *The Urban Review*(2), 143-166. doi: 10.1007/s11256-012-0212-7

Hare, S. (2007). We teach who we are: The intersection of teacher formation and educator dispositions. In M. E. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 139-149). Charlotte, NC: Information Age Publishing.

Harme, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72*, 625-638.

Harrison, J., Smithey, G., McAffee, H., & Weiner, C. (2006). Assessing candidate disposition for admission into teacher education: Can just anyone teach? *Action in Teacher Education*, 72-80. doi: 10.1080/01626620.2006.10463403

Hartlep, N. D., & McCubbins, S. (2013). What makes a star teacher? Examining teacher dispositions, professionalization, and teacher effectiveness using the Haberman star teacher pre-screener. Retrieved from http://www.habermanfoundation.org/Documents/WhatMakesAStarTeacher.pdf

Heinz, M. (2013). Tomorrow's teachers - selecting the best: An exploration of the quality rationale behind academic and experiential selection criteria for initial teacher education programmes. *Educational Assessment, Evaluation and Accountability*(2), 93-114. doi: 10.1007/s11092-013-9162-1

Hernandez, C. M., Morales, A. R., & Shroyer, M. G. (2013). The development of a model of culturally responsive science and mathematics teaching. *Cultural Studies of Science Education*(4), 803-820. doi: 10.1007/s11422-013-9544-1

Hobson, A. J., Giannakaki, M.-S., & Chambers, G. N. (2009). Who withdraws from initial teacher preparation programmes and why? *Educational Research, 51*(3), 321-340. doi: 10.1080/00131880903156906

Ignico, A., & Gammon, K. (2010). A longitudinal study of the professional dispositions of teacher candidates. *Natural Science*(2), 91-94. doi: 10.4236/ns.2010.22014

Johnson, L. E. (2008). Teacher candidate disposition: Moral judgement or regurgitation? *Journal of Moral Education, 37*(4), 429-444. doi: 10.1080/03057240802405678

Johnson, L. E., & Reiman, A. J. (2007). Beginning teacher disposition: Examining the moral/ethical domain. *Teaching and Teacher Education: An International Journal of Research and Studies, 23*(5), 676-687. doi: 10.1016/j.tate.2006.12.006

Johnston, P., Almerico, G. M., Henriott, D., & Shapiro, M. (2011). Descriptions of dispositions for assessment in pre-service teacher education field experiences. *Education*(2), 391-401.

Jones, J. L., & Jones, K. A. (2010). What are the critical characteristics and performances of preservice candidates related to improving P-12 student achievement? A review of current research in teacher education. *Transforming Teacher Education: Taking Stock of Our Evidence Base, Making Recommendations for Promising Directions*, 1.

Jung, E., & Rhodes, D. M. (2008). Revisiting disposition assessment in teacher education: Broadening the focus. *Assessment & Evaluation in Higher Education, 33*(6), 647-660. doi: 10.1080/02602930701773059

Katz, D., Hindin, A., Mueller, M., May, G., & McFadden, L. (2008). Measuring social consciousness: Using multiples of evidence to examine teacher dispositions. *Journal of Ethnographic & Qualitative Research, 2*(2), 129-137.

Katz, L., & Raths, J. D. (1985). Dispositions as goals for teacher education. *Teaching and Teacher Education, 1*(4), 301-307.

Kidd, J. K., Sánchez, S. Y., & Thorp, E. K. (2008). Defining moments: Developing culturally responsive dispositions and teaching practices in early childhood preservice teachers. *Teaching & Teacher Education, 24*(2), 316-329. doi: 10.1016/j.tate.2007.06.003

Lin, M., & Lucey, T. A. (2010). Individual and group reflection strategies: What we learned from preservice teachers. *Multicultural Education, 18*(1), 51-54.

Malm, B. (2009). Towards a new professionalism: Enhancing personal and professional development in teacher education. *Journal of Education for Teaching, 35*(1), 77-91. doi: 10.1080/02607470802587160

McBride, R. E., Xiang, P., & Wittenburg, D. (2002). Dispositions toward critical thinking: The preservice teacher's perspective. *Teachers and Teaching, 8*(1), 29-40. doi: 10.1080/13540600120110556

McKinney, S. E., Haberman, M., Stafford-Johnson, D., & Robinson, J. (2008). Developing teachers for high-poverty schools. *Urban Education, 43*(1), 68-82. doi: 10.1177/0042085907305200

Meijer, P. C., De Graaf, G., & Meirink, J. (2011). Key experiences in student teachers' development. *Teachers & Teaching, 17*(1), 115-129. doi: 10.1080/13540602.2011.538502

Mills, C. (2008). Making a difference: Moving beyond the superficial treatment of diversity. *Asia-Pacific Journal of Teacher Education, 36*(4), 261-275. doi: 10.1080/13598660802375925

Mills, C. (2009). Making sense of pre-service teachers' dispositions towards social justice: Can teacher education make a difference? *Critical Studies in Education, 50*(3), 277-288. doi: 10.1080/17508480903156862

Mills, C. (2012). When 'picking the right people' is not enough: A Bourdieuian analysis of social justice and dispositional change in pre-service teachers. *International Journal of Educational Research, 53*, 269-277. doi: 10.1016/j.ijer.2012.04.001

Mills, C. (2013). A Bourdieuian analysis of teachers' changing dispositions towards social justice: The limitations of practicum placements in pre-service teacher education. *Asia-Pacific Journal of Teacher Education, 41*(1), 41-54. doi: 10.1080/1359866X.2012.753985

Mills, C., & Ballantyne, J. (2010). Pre-service teachers' dispositions towards diversity: Arguing for a developmental hierarchy of change. *Teaching and Teacher Education, 26*, 447-454. doi: 10.1016/j.tate.2009.05.012

Moulding, L. R., Stewart, P. W., & Dunmeyer, M. L. (2014). Pre-service teachers' sense of efficacy: Relationship to academic ability, student teaching placement characteristics, and mentor support. *Teaching and Teacher Education, 41*(0), 60-66. doi: 10.1016/j.tate.2014.03.007

Mueller, M., & Hindin, A. (2011). An analysis of the factors that influence preservice elementary teachers' developing dispositions about teaching all children. *Issues in Teacher Education, 20*(1), 17-34.

Muijs, D., Chapman, C., Collins, A., & Armstrong, P. (2010). *Maximum impact evaluation: the impact of Teach First teachers in schools*. Manchester, England: The University of Manchester. Retrieved from http://teachfirstnz.org/images/uploads/Documents/Manchester_evaluation_of_Teach_First_2010.pdf

Murray, F. B. (2007). Disposition: A superfluous construct in teacher education. *Journal of Teacher Education, 58*(5), 381-387. doi: 10.1177/0022487107307950

Murrell Jr, P. C., Diez, M., Feiman-Nemser, S., & Schussler, D. L. (2010). *Teaching as a moral practice: Defining, developing, and assessing professional dispositions in teacher education*. Cambridge, Mass: Harvard Education Press.

National Council for Accreditation of Teacher Education (NCATE). (2002). *Professional standards for the accreditation of schools, colleges, and departments of education* (2002 ed.). Washington, DC: Author.

Nelsen, P. J. (2014). Intelligent dispositions: Dewey, habits and inquiry in teacher education. *Journal of Teacher Education*. doi: 10.1177/0022487114535267

Ng, W., Nicholas, H., & Williams, A. (2010). School experience influences on pre-service teachers' evolving beliefs about effective teaching. *Teaching & Teacher Education, 26*(2), 278-289. doi: 10.1016/j.tate.2009.03.010

Notar, C. E., Riley, G. W., Taylor, P. W., Thornburg, R. A., & Cargill, R. L. (2009). Dispositions: Ability and assessment. *International Journal of Education*(1), 1-14.

Oja, S. N., & Reiman, A. (2007). A constructivist-developmental perspective. In M. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 91-116). Charlotte, NC: Information Age Publishing.

Payne, M., & Summers, D. G. (2008). From thought police to thoughtful practice: The evolution of dispositions assessment in a teacher education program. *Teaching and Learning*(1), 40-47.

Poulou, M. (2007). Personal teaching efficacy and its sources: Student teachers' perceptions. *Educational Psychology, 27*(2), 191-218. doi: 10.1080/01443410601066693

Rike, C. J., & Sharp, L. K. (2008). Assessing preservice teachers' dispositions: A critical dimension of professional preparation. *Childhood Education, 84*(3), 150-153. doi: 10.1080/00094056.2008.10522994

Ripski, M. B., LoCasale-Crouch, J., & Decker, L. (2011). Pre-service teachers: Dispositional traits, emotional states, and quality of teacher-student interactions. *Teacher Education Quarterly*(2), 77-96.

Ross, J. (1992). Teacher efficacy and the effects of coaching on student achievement. *Canadian Journal of Education, 17*(1), 51-65.

Schulte, L., Edick, N., Edwards, S., & Mackiel, D. (2004). The development and validation of the teacher dispositions index. *Essays in Education, 12*(4), 1-16.

Schussler, D. L., Bercaw, L. A., & Stooksberry, L. M. (2008). Using case studies to explore teacher candidates' intellectual, cultural, and moral dispositions. *Teacher Education Quarterly*(2), 105-122.

Schussler, D. L., & Knarr, L. (2013). Building awareness of dispositions: Enhancing moral sensibilities in teaching. *Journal of Moral Education, 42*(1), 71-87. doi: 10.1080/03057240.2012.722987

Schussler, D. L., Stooksberry, L. M., & Bercaw, L. A. (2010). Understanding teacher candidate dispositions: Reflecting to build self-awareness. *Journal of Teacher Education*(4), 350 –363. doi: 10.1177/0022487110371377

Shandomo, H. M. (2010). The role of critical reflection in teacher education. *School-University Partnerships, 4*(1), 101-113.

Sherman, S. (2006). Moral dispositions in teacher education: Making them matter. *Teacher Education Quarterly, 33*(4), 41-57.

Shidler, L. (2009). The impact of time spent coaching for teacher efficacy on student achievement. *Early Childhood Education Journal, 36*(5), 453-460. doi: 10.1007/s10643-008-0298-4

Shook, A. (2012). A study of preservice educators' dispositions to change behavior management strategies. *Preventing School Failure, 56*(2), 129–136. doi: 10.1080/1045988X.2011.606440

Singh, D. K., & Stoloff, D. L. (2008). Assessment of teacher dispositions. *College Student Journal*(4), 1169-1180.

Sockett, H. (2006a). Introduction. In H. Sockett (Ed.), *Teacher dispositions: Building a teacher education framework of moral standards* (pp. 7-8). Washington: AACTE Publications.

Sockett, H. (2006b). Character, rules, and relations. In H. Sockett (Ed.), *Teacher dispositions: Building a teacher education framework of moral standards* (pp. 9-26). Washington: AACTE Publications.

Sockett, H. (2009). Dispositions as virtues: The complexity of the construct. *Journal of Teacher Education, 60*(3), 291-303. doi: 10.1177/0022487109335189

Splitter, L. J. (2010). Dispositions in education: Nonentities worth talking about. *Educational Theory, 60*(2), 203-230. doi: 10.1111/j.1741-5446.2010.00354.x

Stanfield, J., & Cremin, H. (2013). Importing control in initial teacher training: Theorizing the construction of specific habitus in recent proposals for induction into teaching. *Journal of Education Policy, 28*(1), 21-37. doi: 10.1080/02680939.2012.682608

Stewart, P., & Davis, S. (2009). *Developing dispositions of preservice teachers through membership in professional organizations. Unpublished manuscript*. Department of Education, Arkansas State University Mountain Home. Mountain Home, Arkansas.

Stooksberry, L. M., Schussler, D. L., & Bercaw, L. A. (2009). Conceptualizing dispositions: Intellectual, cultural, and moral domains of teaching. *Teachers & Teaching, 15*(6), 719-736. doi: 10.1080/13540600903357041

Talbert-Johnson, C. (2006). Preparing highly qualified teacher candidates for urban schools: The importance of dispositions. *Education & Urban Society, 39*(1), 147-160. doi: 10.1177/0013124506293321

Taylor, R. L., & Wasicsko, M. M. (2000). *The dispositions to teach.* Paper presented at the Annual meeting of the South Regional Association of Teacher Education, Lexington, KY.

Thompson, F. (2009). The development and validation of the multicultural dispositions index. *Multicultural Perspectives, 11*(2), 94-100. doi: 10.1080/15210960903028776

Thomson, M. M., Turner, J. E., & Nietfeld, J. L. (2012). A typological approach to investigate the teaching career decision: Motivations and beliefs about teaching of prospective teacher candidates. *Teaching & Teacher Education, 28*(3), 324-335. doi: 10.1016/j.tate.2011.10.007

Villegas, A. (2007). Dispositions in teacher education: A look at social justice. *Journal of Teacher Education, 58*(5), 370-380. doi: 10.1177/0022487107308419

Wasicsko, M. M. (2007). The perceptual approach to teacher dispositions: The effective teacher as an effective person. In M. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education*. Charlotte, NC: Information Age Publishing.

Wasicsko, M. M., Wirtz, P., & Resor, C. (2009). Using dispositions in the teacher admission process. *SRATE Journal, 18*(2), 19-26.

Wayda, V., & Lund, J. (2005). Assessing dispositions: An unresolved challenge in teacher education; teacher candidates may know their subject, but are they suited for the job? *The Journal of Physical Education, Recreation & Dance, 76*(1), 34-41. doi: 10.1080/07303084.2005.10607317

Welch, F. C., Pitts, R. E., Tenini, K. J., Kuenlen, M. G., & Wood, S. G. (2010). Significant issues in defining and assessing teacher dispositions. *Teacher Educator, 45*(3), 179-201. doi: 10.1080/08878730.2010.489992

Wiggins, R. A., Follo, E. J., & Eberly, M. B. (2007). The impact of a field immersion program on pre-service teachers' attitudes toward teaching in culturally diverse classrooms. *Teaching and Teacher Education, 23*(5), 653-663. doi: 10.1016/j.tate.2007.02.007

Wise, A. E. (2006). Preface. In H. Sockett (Ed.), *Teacher dispositions: Building a teacher education framework of moral standards* (pp. 5). Washington: AACTE Publications.

Young, A., & Wilkins, E. (2008). Dispositional statements on student teacher evaluation instruments: Commonalities across institutions. *Teacher Educator, 43*(3), 198-215. doi: 10.1080/08878730802055115

Younger, M., Brindley, S., Pedder, D., & Hagger, H. (2004). Starting points: Student teachers' reasons for becoming teachers and their preconceptions of what this will mean. *European Journal of Teacher Education, 27*(3), 245-264. doi: 10.1080/0261976042000290787

Appendix 1: List of database searches

Database searched	Search terms	Time period of search	No. of hits	Saved in Endnote as	Items saved	Notes
Discover	Disposition* OR tendenc*OR inclination OR propensit* OR predisposition* with teach*	17/04/14 11.00	3853	Discover search 1	57	
Discover	Disposition* OR tendenc*OR inclination OR propensit* OR predisposition* With "student teach*" OR "prospective teach*"	29/04/14 14.00	197	Discover search 2	9	plus 15 already found in Discover search 1
Discover	Disposition* OR tendenc*OR inclination OR propensit* OR predisposition* with "candidate teach*"	29/04/14 17.30	0	Discover search 3	0	
Discover	character* OR proclivity OR inclination* OR predilection* OR temperament* with "student teach*" OR "prospective teach*"	29/04/14 17.45	1225	Discover search 4	21	plus 2 already found in Discover search 1
ERIC	Disposition* OR tendenc*OR inclination OR propensit* OR predisposition* with teach*	30/04/14 18.00	1119	ERIC search 1	24	plus 29 already found in previous searches - first 360 scanned
SCOPUS	Disposition* OR tendenc*OR inclination OR propensit* OR predisposition* with teach*	1/05/14 12.00	27	SCOPUS search 1	2	plus 3 already found in previous searches
SCOPUS	Disposition* OR tendenc*OR inclination OR propensit* OR predisposition* With "student teach*" OR "prospective teach*"	1/05/14 14.00	16	SCOPUS search 2	1	plus 4 already found in previous searches

SCOPUS	Disposition* OR tendenc*OR inclination OR propensit* OR predisposition* with "candidate teach*"	1/05/14 16.00	0	SCOPUS search 3	0	
SCOPUS	character* OR proclivity OR inclination* OR predilection* OR temperament* with "student teach*" OR "prospective teach*"	1/05/14 16.15	142	SCOPUS search 4	0	1 already found
Google scholar	Disposition OR tendency OR inclination OR propensity OR predisposition AND teach	5/05/14 10.00	230,000	Google Scholar search 1		Terms too broad
Google scholar	Disposition OR tendency OR inclination OR propensity OR predisposition AND "student teacher" OR "prospective teacher"	5/05/14 10.05	16,500	Google Scholar search 2	2	Terms too broad
Google scholar	Disposition OR tendency OR inclination OR propensity OR predisposition AND "student teachers" OR "prospective teachers"	5/05/14 11.00	16,600	Google Scholar search 3		Terms too broad
Google scholar	Disposition AND "student teacher"	5/05/14 11.05	14,700	Google Scholar search 4	2	Terms too broad
Google scholar	Relationship between effective teaching AND "teacher disposition"	5/05/14 12.15	434	Google Scholar search 5	3	8 already found
Google Scholar	"teacher disposition" AND "student achievement"	6/05/14 07.00	230	Google Scholar search 6	2	9 already found
Google Scholar	teacher dispositions AND "student achievements"	6/05/14 10.00	11	Google Scholar search 7	0	

Google Scholar	teacher dispositions AND "student achievement"	6/05/14 10.30	612	Google Scholar search 8	2	9 already found - first 100 scanned
Google Scholar	"teacher disposition" AND "teaching quality"	6/05/14 12.00	23	Google Scholar search 9	0	plus 3 already found in previous searches
Google Scholar	"teacher dispositions" AND "teaching quality"	6/05/14 12.30	61	Google Scholar search 10	3	plus 4 already found in previous searches
Discover	"teacher efficacy" & "student achievement"	7/05/14 15.00	277	Discover search 5	6	plus 2 already found in previous searches
Discover	"teacher efficacy" & "student achievement" & "student teach*" OR "prospective teach*"	7/05/14 19.00	181	Discover search 6	1	plus 3 already found in previous searches
SCOPUS	"teacher efficacy" & "student achievement"	8/05/14 10.00	326	SCOPUS search 5	1	plus 1 already found in previous searches
SCOPUS	"teacher efficacy" & "student achievement" & "student teach*" OR "prospective teach*"	8/05/14 11.15	326	SCOPUS search 6	1	plus 3 already found in previous searches

Appendix 2: Search bibliography

Anast Seguin, C., & Ambrosio, A. L. (2002). Multicultural vignettes for teacher preparation. *Multicultural Perspectives, 4*(4), 10-16. doi: 10.1207/S15327892MCP0404_3

Baum, A., & Swick, K. (2008). Dispositions toward families and family involvement: Supporting preservice teacher development. *Early Childhood Education Journal, 35*(6), 579-584. doi: 10.1007/s10643-007-0229-9

Bauml, M. (2009). Examining the unexpected sophistication of preservice teachers' beliefs about the relational dimensions of teaching. *Teaching & Teacher Education, 25*(6), 902-908. doi: 10.1016/j.tate.2009.02.015

Benton-Borghi, B. H., & Chang, Y. M. (2012). Critical examination of candidates' diversity competence: Rigorous and systematic assessment of candidates' efficacy to teach diverse student populations. *The Teacher Educator, 47*(1), 29-44. doi: 10.1080/08878730.2011.632472

Blanton, L. P., Sindelar, P. T., & Correa, V. I. (2006). Models and measures of beginning teacher quality. *Journal of Special Education, 40*(2), 115-127. doi: 10.1177/00224669060400020201

Borko, H., Liston, D., & Whitcomb, J. A. (2007). Apples and fishes: The debate over dispositions in teacher education. *Journal of Teacher Education*(5), 359-364. doi: 10.1177/0022487107309977

Bradley, A. P., & Jurchan, J. (2013). Dispositions in teacher education: Complex but comprehensible. *Education, 3*(1), 98-104. doi: 10.5923/j.edu.20130301.13

Breese, L., & Nawrocki-Chabin, R. (2007). Social-cognitive perspective in dispositional development. In M. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 31-52). Charlotte, NC: Information Age Publishing.

Bruce, C. D., Esmonde, I., Ross, J., Dookie, L., & Beatty, R. (2010). The effects of sustained classroom-embedded teacher professional learning on teacher efficacy and related student achievement. *Teaching & Teacher Education, 26*(8), 1598-1608. doi: 10.1016/j.tate.2010.06.011

Burant, T. J., Chubbuck, S. M., & Whipp, J. L. (2007). Reclaiming the moral in the dispositions debate. *Journal of Teacher Education*(5), 397-411. doi: 10.1177/0022487107307949

Carr, D. (2011). Values, virtues and professional development in education and teaching. *International Journal of Educational Research, 50*(3), 171-176. doi: 10.1016/j.ijer.2011.07.004

Carroll, D. (2012). Examining the development of dispositions for ambitious teaching: One teacher candidate's journey. *New Educator, 8*(1), 38-64. doi: 10.1080/1547688X.2011.619950

Carter Andrews, D. J. (2009). "The hardest thing to turn from": The effects of service-learning on preparing urban educators. *Equity & Excellence in Education, 42*(3), 272-293. doi: 10.1080/10665680903060261

Cosgrove, M., & Carpenter, B. (2012). Value-added measures of teacher candidates' dispositions. *SRATE Journal, 22*(1), 1-7.

Coultas, J. C., & Lewin, K. M. (2002). Who becomes a teacher? The characteristics of student teachers in four countries. *International Journal of Educational Development, 22*(3–4), 243-260. doi: 10.1016/S0738-0593(01)00066-9

Da Ros-Voseles, D., & Moss, L. (2007). The role of dispositions in the education of future teachers. *Young Children, 62*(5), 90-96.

Damon, W. (2007). Dispositions and teacher assessment: The need for a more rigorous definition. *Journal of Teacher Education*(5), 365-369. doi: 10.1177/0022487107308732

Dee, A. L. (2012). Evidence of cultural competence within teacher performance assessments. *Action in Teacher Education, 34*(3), 262-275. doi: 10.1080/01626620.2012.694785

Dee, J. R., & Henkin, A. B. (2002). Assessing dispositions toward cultural diversity among preservice teachers. *Urban Education, 37*(1), 22-40. doi: 10.1177/0042085902371003

DeLuca, C. (2012). Selecting inclusive teacher candidates: Validity and reliability issues in admission policy and practice. *Teacher Education Quarterly, 39*(4), 7-31.

Department for Education and National College for Teaching and Leadership. (2014a). *Initial teacher training criteria*. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/279344/ITT_criteria.pdf

Department for Education and National College for Teaching and Leadership. (2014b). *Initial teacher training criteria: Supporting advice*. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/296314/ITT_criteria_supporting_advice.pdf

Diez, M. (1990). A thrust from within: Reconceptualizing teacher education at Alverno College. *Peabody Journal of Education, 65*(2), 4-18.

Diez, M. (2006a). Assessing dispositions: Five principles to guide practice. In H. Sockett (Ed.), *Teacher dispositions: Building a teacher education framework of moral standards* (pp. 49-68). Washington: AACTE.

Diez, M. (2006b). Assessing dispositions: Context and questions. *New Educator, 2*(1), 57-72. doi: 10.1080/15476880500486137

Diez, M. (2007a). Looking back and moving forward: Three tensions in the teacher dispositions discourse. *Journal of Teacher Education*(5), 388-396. doi: 10.1177/0022487107308418

Diez, M. (2007b). Assessing dispositions: Context and questions. In M. E. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 183-202). Charlotte, NC: Information Age Publishing

Diez, M. (2007c). The role of coaching in working with dispositions. In M. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 203-218). Charlotte, NC: Information Age Publishing.

Diez, M., & Murrell Jr, P. C. (2010a). Introduction. In P. C. Murrell Jr, M. E. Diez, S. Feiman-Nemser, & D. L. Schussler (Eds.), *Teaching as a moral practice: Defining, developing and assessing professional dispositions in teacher education* (pp. 1-6). Cambridge, Mass: Harvard Education Press.

Diez, M., & Murrell Jr, P. C. (2010b). Dispositions in teacher education - starting points for consideration. In P. C. Murrell Jr, M. E. Diez, S. Feiman-Nemser, & D. L. Schussler (Eds.), *Teaching as a moral practice: Defining, developing and assessing professional dispositions in teacher education* (pp. 7-26). Cambridge, Mass: Harvard Education Press.

Diez, M., & Raths, J. D. (2007) *Dispositions in teacher education* (pp. 183-202). Charlotte, NC: Information Age Publishing.

Dinham, S. (2013). The quality teaching movement in Australia encounters difficult terrain: A personal perspective. *Australian Journal of Education, 57*(2), 91-106. doi: 10.1177/0004944113485840

Dotger, B. H. (2010). "I had no idea": Developing dispositional awareness and sensitivity through a cross-professional pedagogy. *Teaching & Teacher Education, 26*(4), 805-812. doi: 10.1016/j.tate.2009.10.017

Dottin, E. S. (2006). A Deweyan approach to the development of moral dispositions in professional teacher education communities: Using a conceptual framework. In H. Sockett (Ed.), *Teacher dispositions: Building a teacher education framework of moral standards* (pp. 27-48). Washington: AACTE Publications.

Duplass, J. A., & Cruz, B. C. (2010). Professional dispositions: What's a social studies education professor to do? *The Social Studies*(4), 140-151. doi: 10.1080/00377990903284138

Edwards, A., & Protheroe, L. (2003). Learning to see in classrooms: What are student teachers learning about teaching and learning while learning to teach in schools? *British Educational Research Journal*(2), 227. doi: 10.2307/1501616

Erginer, E., & Dursun, F. (2009). The meanings attributed to the future characteristics of teachers by prospective teachers: A concept map study. *Procedia - Social and Behavioral Sciences, 1*, 1389-1395. doi: 10.1016/j.sbspro.2009.01.245

Fehr, M. C., & Agnello, M. F. (2012). Engaging in diverse classrooms: Using a diversity awareness survey to measure preservice teachers' preparedness, willingness, & comfort. *Multicultural Education*(2), 34-39.

Feiman-Nemser, S., & Schussler, D. L. (2010). Defining, developing, and assessing dispositions: A cross-case analysis. In P. C. Murrell Jr, M. Diez, S. Feiman-Nemser, & D. L. Schussler (Eds.), *Teaching as a moral practice: defining, developing and assessing professional dispositions in teacher education* (pp. 177-201). Cambridge, Mass: Harvard Education Press.

Fitchett, P. G., Starker, T. V., & Salyers, B. (2012). Examining culturally responsive teaching self-efficacy in a preservice social studies education course. *Urban Education, 47*(3), 585-611. doi: 10.1177/0042085912436568

Ford, T. N., & Quinn, L. (2010). First year teacher education candidates: What are their perceptions about multicultural education? *Multicultural Education, 17*(4), 18-24.

Freeman, L. (2007a). An overview of teacher dispositions in teacher education. In M. E. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 3-30). Charlotte, NC: Information Age Publishing.

Freeman, L. (2007b). Teacher dispositions in context. In M. E. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 117-138). Charlotte, NC: Information Age Publishing.

Gambhir, M., Broad, K., Evans, M., & Gaskell, J. (2008). *Characterizing initial teacher education in Canada: Themes and issues* Retrieved from http://www.oise.utoronto.ca/ite/UserFiles/File/CharacterizingITE.pdf

Garmon, M. A. (2004). Changing preservice teachers' attitudes/beliefs about diversity: What are the critical factors? *Journal of Teacher Education*(3), 201-213. doi: 10.1177/0022487104263080

Garmon, M. A. (2005). Six key factors for changing preservice teachers' attitudes/beliefs about diversity. *Educational Studies, 38*(3), 275-286. doi: 10.1207/s15326993es3803_7

Gershman, J. (2005). *'Disposition' emerges as issue at Brooklyn College*. Retrieved from http://www.nysun.com/new-york/disposition-emerges-as-issue-at-brooklyn-college/14604/

Giovannelli, M. (2003). Relationship between reflective disposition toward teaching and effective teaching. *The Journal of Educational Research*(5), 293-309. doi: 10.1080/00220670309597642

Goe, L. (2007). *The link between teacher quality and student outcomes: A research synthesis*. Washington, D.C: National Comprehensive Center for Teacher Quality.

Goldhaber, D., Liddle, S., & Theobald, R. (2013). The gateway to the profession: Assessing teacher preparation programs based on student achievement. *Economics of Education Review, 34*, 29-44. doi: 10.1016/j.econedurev.2013.01.011

Hagger, H., Burn, K., Mutton, T., & Brindley, S. (2008). Practice makes perfect? Learning to learn as a teacher. *Oxford Review of Education, 34*(2), 159-178. doi: 10.1080/03054980701614978

Han, K. T. (2013). 'These things do not ring true to me': Preservice teacher dispositions to social justice literature in a remote state teacher education program. *The Urban Review*(2), 143-166. doi: 10.1007/s11256-012-0212-7

Hare, S. (2007). We teach who we are: The intersection of teacher formation and educator dispositions. In M. E. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 139-149). Charlotte, NC: Information Age Publishing.

Harme, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72*, 625-638.

Harris, D. N., & Sass, T. R. (2011). Teacher training, teacher quality and student achievement. *Journal of Public Economics, 95*(7/8), 798-812. doi: 10.1016/j.jpubeco.2010.11.009

Harris, R. (2011). Learning how to be a teacher - lessons the Government needs to learn. *Prospero, 17*(3), 28-33.

Harrison, J., Smithey, G., McAffee, H., & Weiner, C. (2006). Assessing candidate disposition for admission into teacher education: Can just anyone teach? *Action in Teacher Education*, 72-80. doi: 10.1080/01626620.2006.10463403

Hartlep, N. D., & McCubbins, S. (2013). What makes a star teacher? Examining teacher dispositions, professionalization, and teacher effectiveness using the Haberman star teacher pre-screener. Retrieved from http://www.habermanfoundation.org/Documents/WhatMakesAStarTeacher.pdf

Hattie, J. (2003). *Distinguishing expert teachers from novice and experienced teachers. Teachers make a difference: What is the research evidence?* http://www.decd.sa.gov.au/limestonecoast/files/pages/new%20page/PLC/teachers_make_a_difference.pdf

Heinz, M. (2013). Tomorrow's teachers - selecting the best: An exploration of the quality rationale behind academic and experiential selection criteria for initial teacher education programmes. *Educational Assessment, Evaluation and Accountability*(2), 93-114. doi: 10.1007/s11092-013-9162-1

Helm, C. (2006). The assessment of teacher dispositions. *Clearing House, 79*(6), 237-239. doi: 10.3200/TCHS.79.6.237-239

Helm, C. (2007). Teacher dispositions affecting self-esteem and student performance. *Clearing House, 80*(3), 109-110. doi: 10.3200/TCHS.80.3.109-110

Henry, G. T., Campbell, S. L., Thompson, C. L., Patriarca, L. A., Luterbach, K. J., Lys, D. B., & Covington, V. M. (2013). The predictive validity of measures of teacher candidate programs and performance: Toward an evidence-based approach to teacher preparation. *Journal of Teacher Education*(5), 439-453. doi: 10.1177/0022487113496431

Hernandez, C. M., Morales, A. R., & Shroyer, M. G. (2013). The development of a model of culturally responsive science and mathematics teaching. *Cultural Studies of Science Education*(4), 803-820. doi: 10.1007/s11422-013-9544-1

Hobson, A. J., Giannakaki, M.-S., & Chambers, G. N. (2009). Who withdraws from initial teacher preparation programmes and why? *Educational Research, 51*(3), 321-340. doi: 10.1080/00131880903156906

Hochstetler, S. (2014). The critical role of dispositions: What's missing in measurements of English teacher candidate effectiveness. *Clearing House, 87*(1), 9-14. doi: 10.1080/00098655.2013.813433

Ignico, A., & Gammon, K. (2010). A longitudinal study of the professional dispositions of teacher candidates. *Natural Science*(2), 91-94. doi: 10.4236/ns.2010.22014

Jamil, F. M., Downer, J. T., & Pianta, R. C. (2012). Association of pre-service teachers' performance, personality, and beliefs with teacher self-efficacy at program completion. *Teacher Education Quarterly, 39*(4), 119-138.

Johnson, L. E. (2008). Teacher candidate disposition: Moral judgement or regurgitation? *Journal of Moral Education, 37*(4), 429-444. doi: 10.1080/03057240802405678

Johnson, L. E., & Reiman, A. J. (2007). Beginning teacher disposition: Examining the moral/ethical domain. *Teaching and Teacher Education: An International Journal of Research and Studies, 23*(5), 676-687. doi: 10.1016/j.tate.2006.12.006

Johnston, P., Almerico, G. M., Henriott, D., & Shapiro, M. (2011). Descriptions of dispositions for assessment in pre-service teacher education field experiences. *Education*(2), 391-401.

Jones, J. L., & Jones, K. A. (2010). What are the critical characteristics and performances of preservice candidates related to improving P-12 student achievement? A review of current research in teacher education. *Transforming Teacher Education: Taking Stock of Our Evidence Base, Making Recommendations for Promising Directions*, 1.

Jung, E., & Rhodes, D. M. (2008). Revisiting disposition assessment in teacher education: Broadening the focus. *Assessment & Evaluation in Higher Education, 33*(6), 647-660. doi: 10.1080/02602930701773059

Karges-Bone, L., & Griffin, M. (2009). Do they have the right dispositions? Teacher education in the new conceptual age. *SRATE Journal, 18*(2), 27-33.

Katz, D., Hindin, A., Mueller, M., May, G., & McFadden, L. (2008). Measuring social consciousness: Using multiples of evidence to examine teacher dispositions. *Journal of Ethnographic & Qualitative Research, 2*(2), 129-137.

Katz, L., & Raths, J. D. (1985). Dispositions as goals for teacher education. *Teaching and Teacher Education, 1*(4), 301-307.

Keller, M. M., Goetz, T., Becker, E. S., Morger, V., & Hensley, L. (2014). Feeling and showing: A new conceptualization of dispositional teacher enthusiasm and its relation to students' interest. *Learning and Instruction*, 29-38. doi: 10.1016/j.learninstruc.2014.03.001

Kerr, J.-A., & Dils, K. (2011). Meeting NCATE standard 4: One university's plan to help preservice teachers develop the knowledge, skills, and professional dispositions necessary to ensure that all students learn. *Educational Considerations, 38*(2), 13-19.

Kidd, J. K., Sánchez, S. Y., & Thorp, E. K. (2008). Defining moments: Developing culturally responsive dispositions and teaching practices in early childhood preservice teachers. *Teaching & Teacher Education, 24*(2), 316-329. doi: 10.1016/j.tate.2007.06.003

Koeppen, K. E., & Davison-Jenkins, J. (2006). Do you see what I see? Helping secondary preservice teachers recognize and monitor their teacher dispositions. *Action in Teacher Education, 28*(1), 13-26. doi: 10.1080/01626620.2006.10463564

Krebs, M. M., & Torrez, C. A. (2011). 'I love kids! Doesn't that mean I will be a successful preservice teacher?'. *Curriculum and Teaching Dialogue*(1-2), 69-81.

Kukla-Acevedo, S. (2009). Do teacher characteristics matter? New results on the effects of teacher preparation on student achievement. *Economics of Education Review, 28*(1), 49-57. doi: 10.1016/j.econedurev.2007.10.007

Lazar, A. (2013). Degrees toward social justice teaching: Examining the dispositions of three urban early-career teachers. *The Urban Review*(5), 701-727. doi: 10.1007/s11256-013-0243-8

Lee, Y. A., & Herner-Patnode, L. (2010). Developing teacher candidates' knowledge, skills, and dispositions to teach diverse students. *Journal of Instructional Psychology*(3), 222-235.

Lin, M., & Lucey, T. A. (2010). Individual and group reflection strategies: What we learned from preservice teachers. *Multicultural Education, 18*(1), 51-54.

Lund, J., Wayda, V., Woodard, R., & Buck, M. (2007). Professional dispositions: What are we teaching prospective physical education teachers? *Physical Educator, 64*(1), 38-47.

Malm, B. (2009). Towards a new professionalism: Enhancing personal and professional development in teacher education. *Journal of Education for Teaching, 35*(1), 77-91. doi: 10.1080/02607470802587160

Malmberg, L.-E., & Hagger, H. (2009). Changes in student teachers' agency beliefs during a teacher education year, and relationships with observed classroom quality, and day-to-day experiences. *British Journal of Educational Psychology, 79*(4), 677-694. doi: 10.1348/000709909X454814

Markic, S., & Eilks, I. (2013). Potential changes in prospective chemistry teachers' beliefs about teaching and learning -a cross-level study. *International Journal of Science and Mathematics Education, 11*(4), 979-999.

McBride, R. E., Xiang, P., & Wittenburg, D. (2002). Dispositions toward critical thinking: The preservice teacher's perspective. *Teachers and Teaching, 8*(1), 29-40. doi: 10.1080/13540600120110556

McConney, A., Price, A., & Woods-McConney, A. (2012). *Fast track teacher education: A review of the research literature on "Teach for All" schemes*. Centre for Learning, Change and Development School of Education, Murdoch University

McKinney, S. E., Haberman, M., Stafford-Johnson, D., & Robinson, J. (2008). Developing teachers for high-poverty schools. *Urban Education, 43*(1), 68-82. doi: 10.1177/0042085907305200

McKinney, S. E., Robinson, J., & Spooner, M. (2004). A comparison of urban teacher characteristics for student interns placed in different urban school settings. *Professional Educator, 26*(2), 17-30.

Meijer, P. C., De Graaf, G., & Meirink, J. (2011). Key experiences in student teachers' development. *Teachers & Teaching, 17*(1), 115-129. doi: 10.1080/13540602.2011.538502

Melin, L. S., & Walker, D. A. (2009). A data-driven dispositions model for teacher candidates and program review. *Action in Teacher Education, 31 58-74*(1), 58-74. doi: 10.1080/01626620.2009.10463511

Mills, C. (2008). Making a difference: Moving beyond the superficial treatment of diversity. *Asia-Pacific Journal of Teacher Education, 36*(4), 261-275. doi: 10.1080/13598660802375925

Mills, C. (2009). Making sense of pre-service teachers' dispositions towards social justice: Can teacher education make a difference? *Critical Studies in Education, 50*(3), 277-288. doi: 10.1080/17508480903156862

Mills, C. (2012). When 'picking the right people' is not enough: A Bourdieuian analysis of social justice and dispositional change in pre-service teachers. *International Journal of Educational Research, 53*, 269-277. doi: 10.1016/j.ijer.2012.04.001

Mills, C. (2013). A Bourdieuian analysis of teachers' changing dispositions towards social justice: The limitations of practicum placements in pre-service teacher education. *Asia-Pacific Journal of Teacher Education, 41*(1), 41-54. doi: 10.1080/1359866X.2012.753985

Mills, C., & Ballantyne, J. (2010). Pre-service teachers' dispositions towards diversity: Arguing for a developmental hierarchy of change. *Teaching and Teacher Education, 26*, 447-454. doi: 10.1016/j.tate.2009.05.012

Minor, L. C., Onwuegbuzie, A. J., Witcher, A. E., & James, T. L. (2002). Preservice teachers' educational beliefs and their perceptions of characteristics of effective teachers. *Journal of Educational Research, 96*(2), 116-127.

Moulding, L. R., Stewart, P. W., & Dunmeyer, M. L. (2014). Pre-service teachers' sense of efficacy: Relationship to academic ability, student teaching placement characteristics, and mentor support. *Teaching and Teacher Education, 41*(0), 60-66. doi: 10.1016/j.tate.2014.03.007

Mueller, M., & Hindin, A. (2011). An analysis of the factors that influence preservice elementary teachers' developing dispositions about teaching all children. *Issues in Teacher Education, 20*(1), 17-34.

Muijs, D., Chapman, C., Collins, A., & Armstrong, P. (2010). *Maximum impact evaluation: the impact of Teach First teachers in schools*. Manchester, England: The University of Manchester. Retrieved from http://teachfirstnz.org/images/uploads/Documents/Manchester_evaluation_of_Teach_First_2010.pdf

Murray, F. B. (2007). Disposition: A superfluous construct in teacher education. *Journal of Teacher Education, 58*(5), 381-387. doi: 10.1177/0022487107307950

Murrell Jr, P. C., Diez, M., Feiman-Nemser, S., & Schussler, D. L. (2010). *Teaching as a moral practice: Defining, developing, and assessing professional dispositions in teacher education*. Cambridge, Mass: Harvard Education Press.

Nadelson, L. S., Boham, M. D., Conlon-Khan, L., Fuentealba, M. J., Hall, C. J., Hoetker, G. A., . . . Zenkert, A. J. (2012). A shifting paradigm: Preservice teachers' multicultural attitudes and efficacy. *Urban Education, 47*(6), 1183-1208. doi: 10.1177/0042085912449750

National Council for Accreditation of Teacher Education (NCATE). (2002). *Professional standards for the accreditation of schools, colleges, and departments of education* (2002 ed.). Washington, DC: Author.

Nelsen, P. J. (2014). Intelligent dispositions: Dewey, habits and inquiry in teacher education. *Journal of Teacher Education*. doi: 10.1177/0022487114535267

Neumann, J. W. (2013). Critical pedagogy's problem with changing teachers' dispositions towards critical teaching. *Interchange: A Quarterly Review of Education*(1-2), 129. doi: 10.1007/s10780-013-9200-4

Ng, W., Nicholas, H., & Williams, A. (2010). School experience influences on pre-service teachers' evolving beliefs about effective teaching. *Teaching & Teacher Education, 26*(2), 278-289. doi: 10.1016/j.tate.2009.03.010

Nolan, K. (2012). Dispositions in the field: Viewing mathematics teacher education through the lens of Bourdieu's social field theory. *Educational Studies in Mathematics*(1-2), 201. doi: 10.1007/s10649-011-9355-9

Notar, C. E., Riley, G. W., Taylor, P. W., Thornburg, R. A., & Cargill, R. L. (2009). Dispositions: Ability and assessment. *International Journal of Education*(1), 1-14.

Oja, S. N., & Reiman, A. (2007). A constructivist-developmental perspective. In M. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education* (pp. 91-116). Charlotte, NC: Information Age Publishing.

Osguthorpe, R. D. (2008). On the reasons we want teachers of good disposition and moral character. *Journal of Teacher Education*(4), 288-299. doi: 10.1177/0022487108321377

Pachler, N., Makoe, P., Burns, M., & Blommaert, J. (2008). The things (we think) we (ought to) do: Ideological processes and practices in teaching. *Teaching and Teacher Education, 24*, 437-450. doi: 10.1016/j.tate.2006.11.014

Payne, M., & Summers, D. G. (2008). From thought police to thoughtful practice: The evolution of dispositions assessment in a teacher education program. *Teaching and Learning*(1), 40-47.

Poplin, M., Redfern, M., Hoff, L., Pawlak, P., Durish, D., Straus, L., . . . Rivera, J. (2012). *Most value added and least value lost: Highly effective teachers in low performing urban schools*. Paper presented at the AERA Presentation, Vancouver, BC, Canada. http://cgu.edu/PDFFiles/ses/AERAPaperFinal4-12-12%20Poplin%20pg5331.pdf

Postlethwaite, K., & Haggarty, L. (2012). Student teachers' thinking about learning to teach: A study of student teachers of mathematics and science at the end of their initial training. *Research Papers in Education, 27*(3), 263-284. doi: 10.1080/02671522.2010.501906

Poulou, M. (2007). Personal teaching efficacy and its sources: Student teachers' perceptions. *Educational Psychology, 27*(2), 191-218. doi: 10.1080/01443410601066693

Rike, C. J., & Sharp, L. K. (2008). Assessing preservice teachers' dispositions: A critical dimension of professional preparation. *Childhood Education, 84*(3), 150-153. doi: 10.1080/00094056.2008.10522994

Ripski, M. B., LoCasale-Crouch, J., & Decker, L. (2011). Pre-service teachers: Dispositional traits, emotional states, and quality of teacher-student interactions. *Teacher Education Quarterly*(2), 77-96.

Ronfeldt, M., Reininger, M., & Kwok, A. (2013). Recruitment or preparation? Investigating the effects of teacher characteristics and student teaching. *Journal of Teacher Education*(4), 319-337. doi: 10.1177/0022487113488143

Rose, S. (2013). How do teacher preparation programs promote desired dispositions in candidates? *SAGE Open, 3*(1), 1-8. doi: 10.1177/2158244013480150

Ross, J. (1992). Teacher efficacy and the effects of coaching on student achievement. *Canadian Journal of Education, 17*(1), 51-65.

Ruitenberg, C. W. (2011). The trouble with dispositions: A critical examination of personal beliefs, professional commitments and actual conduct in teacher education. *Ethics and Education, 6*(1), 41-52. doi: 10.1080/17449642.2011.587347

Schulte, L., Edick, N., Edwards, S., & Mackiel, D. (2004). The development and validation of the teacher dispositions index. *Essays in Education, 12*(4), 1-16.

Schussler, D. L. (2006). Defining dispositions: Wading through murky waters. *The Teacher Educator, 41*(4), 251-268. doi: 10.1080/08878730609555387

Schussler, D. L., Bercaw, L. A., & Stooksberry, L. M. (2008a). The fabric of teacher candidate dispositions: What case studies reveal about teacher thinking. *Action in Teacher Education, 29*(4), 39-52. doi: 10.1080/01626620.2008.10463468

Schussler, D. L., Bercaw, L. A., & Stooksberry, L. M. (2008b). Using case studies to explore teacher candidates' intellectual, cultural, and moral dispositions. *Teacher Education Quarterly*(2), 105-122.

Schussler, D. L., & Knarr, L. (2013). Building awareness of dispositions: Enhancing moral sensibilities in teaching. *Journal of Moral Education, 42*(1), 71-87. doi: 10.1080/03057240.2012.722987

Schussler, D. L., Stooksberry, L. M., & Bercaw, L. A. (2010). Understanding teacher candidate dispositions: Reflecting to build self-awareness. *Journal of Teacher Education*(4), 350 –363. doi: 10.1177/0022487110371377

Scott, C., & Dinham, S. (2008). Born not made: The nativist myth and teachers' thinking. *Teacher Development, 12*(2), 115-124. doi: 10.1080/13664530802038105

Shandomo, H. M. (2010). The role of critical reflection in teacher education. *School-University Partnerships, 4*(1), 101-113.

Sherman, S. (2006). Moral dispositions in teacher education: Making them matter. *Teacher Education Quarterly, 33*(4), 41-57.

Shidler, L. (2009). The impact of time spent coaching for teacher efficacy on student achievement. *Early Childhood Education Journal, 36*(5), 453-460. doi: 10.1007/s10643-008-0298-4

Shiveley, J., & Misco, T. (2010). "But how do I know about their attitudes and beliefs?": A four-step process for integrating and assessing dispositions in teacher education. *Clearing House, 83*(1), 9-14. doi: 10.1080/00098650903267669

Shook, A. (2012). A study of preservice educators' dispositions to change behavior management strategies. *Preventing School Failure, 56*(2), 129–136. doi: 10.1080/1045988X.2011.606440

Singh, D. K., & Stoloff, D. L. (2008). Assessment of teacher dispositions. *College Student Journal*(4), 1169-1180.

Sleeter, C. (2008). Equity, democracy, and neoliberal assaults on teacher education. *Teaching and Teacher Education, 24*(8), 1947-1957. doi: 10.1016/j.tate.2008.04.003

Sockett, H. (2006a). Introduction. In H. Sockett (Ed.), *Teacher dispositions: Building a teacher education framework of moral standards* (pp. 7-8). Washington: AACTE Publications.

Sockett, H. (2006b). Character, rules, and relations. In H. Sockett (Ed.), *Teacher dispositions: Building a teacher education framework of moral standards* (pp. 9-26). Washington: AACTE Publications.

Sockett, H. (2009). Dispositions as virtues: The complexity of the construct. *Journal of Teacher Education, 60*(3), 291-303. doi: 10.1177/0022487109335189

Splitter, L. J. (2010). Dispositions in education: Nonentities worth talking about. *Educational Theory, 60*(2), 203-230. doi: 10.1111/j.1741-5446.2010.00354.x

Stanfield, J., & Cremin, H. (2013). Importing control in initial teacher training: Theorizing the construction of specific habitus in recent proposals for induction into teaching. *Journal of Education Policy, 28*(1), 21-37. doi: 10.1080/02680939.2012.682608

Stewart, P., & Davis, S. (2009). *Developing dispositions of preservice teachers through membership in professional organizations. Unpublished manuscript*. Department of Education, Arkansas State University Mountain Home. Mountain Home, Arkansas.

Stooksberry, L. M., Schussler, D. L., & Bercaw, L. A. (2009). Conceptualizing dispositions: Intellectual, cultural, and moral domains of teaching. *Teachers & Teaching, 15*(6), 719-736. doi: 10.1080/13540600903357041

Stronge, J. H., Ward, T. J., & Grant, L. W. (2011). What makes good teachers good?: A cross-case analysis of the connection between teacher effectiveness and student achievement. *Journal of Teacher Education, 62*(4), 339-355. doi: 10.1177/0022487111404241

Talbert-Johnson, C. (2006). Preparing highly qualified teacher candidates for urban schools: The importance of dispositions. *Education & Urban Society, 39*(1), 147-160. doi: 10.1177/0013124506293321

Taylor, R. L., & Wasicsko, M. M. (2000). *The dispositions to teach.* Paper presented at the Annual meeting of the South Regional Association of Teacher Education, Lexington, KY.

Thompson, F. (2009). The development and validation of the multicultural dispositions index. *Multicultural Perspectives, 11*(2), 94-100. doi: 10.1080/15210960903028776

Thompson, S., Ransdell, M. F., & Rousseau, C. K. (2005). Effective teachers in urban school settings: Linking teacher disposition and student performance on standardized tests. *Journal of Authentic Learning, 2*(1), 22-36.

Thomson, M. M., Turner, J. E., & Nietfeld, J. L. (2012). A typological approach to investigate the teaching career decision: Motivations and beliefs about teaching of prospective teacher candidates. *Teaching & Teacher Education, 28*(3), 324-335. doi: 10.1016/j.tate.2011.10.007

Tindle, K., Freund, M., Belknap, B., Green, C., & Shotel, J. (2011). The urban teacher residency program: A recursive process to develop professional dispositions, knowledge, and skills of candidates to teach diverse students. *Educational Considerations, 38*(2), 28-35.

Tolar, T. U. (2009). Addressing issues of teaching dispositions at Western New Mexico University. *Delta Kappa Gamma Bulletin, 75*(4), 14-18.

Turnbull, M. (2005). Student teacher professional agency in the practicum. *Asia Pacific Journal of Teacher Education, 33*(2), 195-208. doi: 10.1080/13598660500122116

Villegas, A. (2007). Dispositions in teacher education: A look at social justice. *Journal of Teacher Education, 58*(5), 370-380. doi: 10.1177/0022487107308419

Villegas, A. M., & Lucas, T. (2002). Preparing culturally responsive teachers: Rethinking the curriculum. *Journal of teacher education, 53*(1), 20-32. doi: 10.1177/0022487102053001003

Wadlington, E., & Wadlington, P. (2011). Teacher dispositions: Implications for teacher education. *Childhood Education, 75*(5), 323-326. doi: 10.1080/00094056.2011.10523206

Ward, J. R., & McCotter, S. S. (2004). Reflection as a visible outcome for preservice teachers. *Teaching & Teacher Education, 20*(3), 243-257. doi: 10.1016/j.tate.2004.02.004

Wasicsko, M. M. (2007). The perceptual approach to teacher dispositions: The effective teacher as an effective person. In M. Diez, & J. D. Raths (Eds.), *Dispositions in teacher education*. Charlotte, NC: Information Age Publishing.

Wasicsko, M. M., Wirtz, P., & Resor, C. (2009). Using dispositions in the teacher admission process. *SRATE Journal, 18*(2), 19-26.

Wayda, V., & Lund, J. (2005). Assessing dispositions: An unresolved challenge in teacher education; teacher candidates may know their subject, but are they suited for the job? *The Journal of Physical Education, Recreation & Dance, 76*(1), 34-41. doi: 10.1080/07303084.2005.10607317

Welch, F. C., Pitts, R. E., Tenini, K. J., Kuenlen, M. G., & Wood, S. G. (2010). Significant issues in defining and assessing teacher dispositions. *Teacher Educator, 45*(3), 179-201. doi: 10.1080/08878730.2010.489992

Wheatley, K. (2002). Teacher persistence: A crucial disposition, with implications for teacher education. *Essays in Education, 3*.

Whitsett, G., Roberson, T., Julian, K., & Beckham, L. (2007). First year teachers' reported levels of functioning on selected professional dispositions. *Education, 128*(1), 95-102.

Wiggins, R. A., Follo, E. J., & Eberly, M. B. (2007). The impact of a field immersion program on pre-service teachers' attitudes toward teaching in culturally diverse classrooms. *Teaching and Teacher Education, 23*(5), 653-663. doi: 10.1016/j.tate.2007.02.007

Wise, A. E. (2006). Preface. In H. Sockett (Ed.), *Teacher dispositions: Building a teacher education framework of moral standards* (pp. 5). Washington: AACTE Publications.

Wittmann, S. (2011). Learning strategies and learning-related emotions among teacher trainees. *Teaching & Teacher Education, 27*(3), 524-532. doi: 10.1016/j.tate.2010.10.006

Young, A., & Wilkins, E. (2008). Dispositional statements on student teacher evaluation instruments: Commonalities across institutions. *Teacher Educator, 43*(3), 198-215. doi: 10.1080/08878730802055115

Younger, M., Brindley, S., Pedder, D., & Hagger, H. (2004). Starting points: Student teachers' reasons for becoming teachers and their preconceptions of what this will mean. *European Journal of Teacher Education, 27*(3), 245-264. doi: 10.1080/0261976042000290787

Zenkert Jr, A. J. (2013). *Defining, operationalizing, developing, and assessing candidate dispositions in teacher education*. Boise State University.

Appendix 3: Google search websites

Google search of Disposition to teach – 17/04/2014 returned 8,350,000 – first 100 items scanned

http://coehs.nku.edu/content/coehs/centers/educatordispositions/educatordispositions.html

http://education.wsu.edu/studentservices/disposition/

http://teaching.colostate.edu/tips/tip.cfm?tipid=56

https://www.ied.edu.hk/apfslt/v10_issue2/turkmen/turkmen2.htm

http://d1p3wm1hneu8o1.cloudfront.net/wadlington%20birkman%20teaching%201.pdf

http://www.wce.wwu.edu/Resources/CEP/eJournal/v002n002/a010.shtml

http://faculty.sxu.edu/lz1/300-470/Readings/TheDispositonstoTeach.pdf

http://www.aabri.com/manuscripts/10665.pdf

http://www.usca.edu/essays/vol122004/schulte.pdf

http://www.education.eku.edu/Dean/nnsedintro.htm

http://www.napomle.org/keepingmiddleschoolssuccessful/teaching%20dispositions%20chapter%20-%20nmsa.pdf

http://www.educate.ece.govt.nz/learning/exploringPractice/EducationalLeadership/LeadingProgrammes/Environment/LearningDispositions.aspx

http://www.colorado.edu/education/sites/default/files/attached-files/apples_and_fishes.pdf

http://www.s7colleges.com/learning-innovation/_pdf/A%20Framework%20for%20Teaching%20Learning.pdf

https://www.surveymonkey.com/s/WKDCVP2

http://education.odu.edu/tes/pdf/AssessingTeacherCandidateDispositionsAtOdu.pdf

http://sgo.sagepub.com/content/3/1/2158244013480150

http://steinhardt.nyu.edu/scmsAdmin/media/users/mpr3/ResearchReports/Measuring_the_Developing_Dispositions_of_Teachers_RP-0308-.pdf

http://education.cua.edu/res/docs/1-Disposition-Survey-Official-F05.pdf

http://ecrp.uiuc.edu/v3n1/raths.html

https://www.naesp.org/resources/2/Principal/2006/S-Op51.pdf

http://udini.proquest.com/view/teacher-dispositions-and-efficacy-goid:869737632/

http://www.tandfonline.com/doi/abs/10.1080/01626620.2006.10463403#.U081qFWSx8E

Assessment of dispositions to teach – Google search 21/04/14 – produced 17,400,000 – first 100 items scanned

www.greensburg.pitt.edu/sites/default/files/Teacher Education Dispositions Assessment Categories and Examples.pdf

Professional Dispositions Plan and Information | College of Education | UNC Charlotte

www.lindenwood.edu/education/teacherEd/docs/DispositionAssessmentProcedures.pdf

www.brockport.edu/policies/docs/assessment_of_professional_dispositions_for_teacher_education_candidates.pdf

web.utk.edu/~wwishar1/ddm/printable/atcd.pdf

academics.keene.edu/tk20/pdf/Archive_Teacher_Candidate_Dispositions_Assessment.pdf

Academic Advising and the Dispositions Assessment Process

https://niagara.edu/assets/assets/ncate/Standard1/8/1.8d-Dr.-V.-Rinaldo-et-al.-Validity-and-Reliability-of-Dispositions.pdf

www.ied.edu.hk/obl/files/TeacherDispostions.pdf

http://www.ijhssnet.com/journals/Vol_3_No_3_February_2013/7.pdf

http://www.academia.edu/1323036/Reliability_and_Validity_of_a_Teacher_Candidate_Dispositions_Assessment

http://www.ced.csulb.edu/sites/default/files/documents/mscp-dispositions-assessment_2010-08-05.pdf

http://teachered.cofc.edu/documents/UAP2_UAP3_dispositions.pdf

www.education.purdue.edu/dean/PCC/attachments/2010-10-06/Disposition Process.pdf

Measurement of disposition to teach – 21/04/2014 – returned 17, 700, 000 – first 100 items scanned

http://apbrwww5.apsu.edu/SRATE/JournalEditions/221/Cosgrove.pdf

https://www.calu.edu/academics/colleges/education/common/disposition-forms/index.htm

https://www.calu.edu/academics/colleges/education/common/disposition-forms/index.htm

http://files.eric.ed.gov/fulltext/ED502874.pdf

byuflang276.wikispaces.com/file/view/Hallam+Lang+Educator+Dispositions.pdf

http://www.nssa.us/journals/2010-34-2/2010-34-2-01.htm

http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=5949&context=etd

www.scateonline.org/pdfs/marshall.pdf

http://article.sapub.org/10.5923.j.edu.20130301.13.html

http://www.macrothink.org/journal/index.php/ije/article/download/133/111

http://www.ncate.org/Standards/UnitStandards/Glossary/tabid/477/Default.aspx

http://chapters.scarecrowpress.com/15/788/1578862035ch1.pdf

Disposition initial teacher education – 21/04/2014 returned 2,330,000 – first 100 items scanned

http://www.educationcounts.govt.nz/publications/ECE/2511/initial-teacher-education-outcomes

www.mcneese.edu/f/c/9eb30343/dispositions_plan_021308.pdf

www2.mansfield.edu/edspeced/upload/TeacherEducationDispositionsfinal208.pdf

http://degruyteropen.com/wp-content/uploads/2013/11/04_Developing-Researcherly-Dispositions-in-an-Initial-Teacher-Education-Context-Successes-and-Dilemmas-Mary-Roche.pdf

www.teachingcouncil.ie/_fileupload/Teacher Education/Final Criteria and Guidelines for Existing Progs EIRE Aug2011.pdf

www.teacherscouncil.govt.nz/sites/default/files/Approval Review and Monitoring Processes and Requirements for ITE Programmes 2010-10-07.pdf

http://www.winthrop.edu/coe/default.aspx?id=12866

http://portal.education.indiana.edu/ncate-ksd/strongProfessionalDispositionsstrong.aspx

http://www.cbc.edu/academics/academic_departments/education.aspx

http://cvs.gnowledge.org/episteme3/pro_pdfs/34-hardy-ah-ds-gw.pdf

http://coeaccreditation.eku.edu/ncate/standard1/Dispositions

http://www.stemfest.niu.edu/assessment/committees/CAN/PresentationsPapersArticles/DispositionsModelArticle.pdf

www.brockport.edu/peu/cicslassessment/Matrix2.pdf

http://www.unco.edu/cebs/ncate/Candidates_Dispositions_Report_published.pdf

http://www.wiu.edu/cas/history/pdf/TEPHandbook.pdf

http://www.teacherswork.ac.nz/journal/volume3_issue1/tarr.pdf

http://ncate.pages.tcnj.edu/standard-1-candidate-knowledge-skills-and-professional-dispositions/

http://www.geneseo.edu/education

http://eprints.qut.edu.au/56865/1/stem2012_59.pdf

Davis (2007) Initial teacher certification in a virtual environment: Student dispositions and program implications - ProQuest Dissertations & Theses A&I - ProQuest-

education.auburn.edu/files/assessment/key_assessment_itp/prof_disp_math_f13.pdf

www.montclair.edu/Portrait-of-a-teacher.pdf

"Disposition teacher training" 21/4/2014 – produce 111 results – all scanned

http://edwardawilliamsonphd.weebly.com/uploads/1/3/3/5/13359985/2005paper.pdf

http://www.academia.edu/1492058/Emerging_technologies_Innovative_teachers_and_moral_cohesion