

**What is Known about the Relationship between  
Instructional Development Approaches  
and Effective Teaching Outcomes?  
A Meta-study of the Instructional Development  
Research Literature**

by

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## **ABSTRACT**

This analysis of the instructional development literature in higher education is a meta-study of 73 research studies conducted between 2000 and 2009. Meta-study includes: a meta-theory analysis of theory used in the research studies; a meta-methodology analysis of research approaches used; a meta-data-analysis of study findings and finally a meta-synthesis of the results of the first three components. The primary research question, to determine what is known about the relationship between instructional development approaches used in higher education and effective teaching outcomes, could not be answered since the research is mostly based on narrow research questions, and focuses on individual change in teachers; a wide variety of approaches may lead to some change on an individual level. However, examination of the findings revealed several themes: a focus on individual, rather than departmental or broader, change; a focus on evaluation; and a lack of reference to the complex environment where research and practice occurs. The implications of the findings for the developing field of instructional development are explored. As with earlier systematic reviews, this meta-study identifies weaknesses in the approach to research. In particular, the lack of reference to context and the frequently narrow focus on evaluation limits the contribution made by research in this area.

**Keywords:** Instructional development; academic development; faculty development; meta-study

## **DEDICATION**

For everyone who tries to make teaching the best that it can be.

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# **1. INSTRUCTIONAL DEVELOPMENT IN HIGHER EDUCATION: THE FIELD OF INQUIRY**

## **1.1. Introduction to the study**

This meta-study focuses on research on instructional development for university faculty published between 2000 through 2009. Based on a detailed examination of the methodology, theory and findings of 73 separate research studies, it describes the state of the research in the field and what is known about the connection between instructional development initiatives and teaching outcomes. The reasons for identified weaknesses in the research are explored as are the implications of this for the field. Future directions for research and practice are discussed.

This study is reported in four chapters:

- Chapter 1 provides a background to the history and current practice of instructional development, analyses three previous systematic reviews of the instructional development practice literature and considers ways in which other reviews are used within the field;
- Chapter 2 presents the case for using meta-study methodology to analyse recent literature in the field, describes the methodology used, defines inclusion criteria and explains the process followed;
- Chapter 3 reports findings; and
- Chapter 4, the discussion chapter, includes consideration of the findings and suggestions for further research and practice.

### **1.1.1. Definition of terms**

The term “instructional development” is used throughout this study to describe actions, planned and undertaken by faculty members themselves or by others working with them, aimed at enhancing teaching in universities. These activities are also referred to as “instructional development initiatives” in this study. The term “academic

development” is used in this study to describe broader initiatives aimed at assisting faculty with non-teaching aspects of their role. It is important to clarify the use of terms, since they are not used consistently in the literature. “Faculty development” is a term sometimes used to describe instructional development, and was the term used by several reviews of the related literature over the past thirty years (Emerson & Mosteller, 2000; Levinson-Rose & Menges, 1981; Steinert, Mann, Centeno, Dolmans, Spencer, Gelula, & Prideau, 2006; Weimer & Lenze, 1991). Wilkerson and Irby (1998), for example, use the term “faculty development” broadly, to describe four aspects of professional development for university faculty, including orientation to faculty roles, instructional development, leadership development and organizational development. Some other researchers and reviewers prefer “instructional development” for activities specifically connected to the enhancement of teaching (Stes, Min-Leliveld, Gijbels, & Van Petegem, 2010), but “educational development,” “academic development,” “staff development” and “professional development for teaching staff” are also used. For instance, Gosling (2009) used all of these terms interchangeably in his 2009 examination of the field in the United Kingdom. In this study, “instructional development” is used to distinguish academic development activities intended for enhancement of teaching practice from those intended for other purposes; those intended for other purposes are termed “academic development.”

Although many of these terms are used at every level of education, this particular study includes only instructional development that addresses teaching in universities. Community colleges and other post-secondary institutions, as well as K-12 schools, were excluded.

### **1.1.2. Purpose of this study**

This study is a systematic review of the literature of practice in instructional development, conducted using a meta-study methodology. The primary purpose of this study was to determine what the literature of practice tells us about the connection between instructional development initiatives and teaching. A secondary purpose, emerging as the study proceeded, was to consider what the literature of practice reveals about instructional development as a field of research within the broader context of academic development. The literature of instructional development practice is one part of the overall literature of academic development; this broader category includes the

empirical studies of teaching enhancement initiatives that are the focus of this study, as well as conceptual articles, anecdotal reports on initiatives and studies focused on other aspects of academic development. This study's second purpose, to examine instructional development as a research field, is inspired by the work of earlier reviewers discussed later in this chapter, by the findings of this meta-study and by my own experience in instructional development. Almost unanimously, those who have reviewed the literature of practice in the past have identified weaknesses within the field. Given my background as a practitioner planning and delivering instructional development opportunities at a technical institute, I wanted to reflect on the connection between the research literature and my own practice. I saw this meta-study as an opportunity to determine if there is anything in the literature of practice that can illuminate the reasons for weaknesses reviewers have identified in the instructional development research, and also to seek other patterns in the findings to see what they tell us about the field of instructional development in general.

### **1.1.3. My path to this research**

My work as an instructional development practitioner led me to undertake this research. From 2000 until 2005, I worked as an Instructional Development Consultant at the British Columbia Institute of Technology. An important part of my work was to assist instructors (many of whom were new to teaching) in their efforts to enhance their teaching skills. I designed and presented workshops, coached instructors one-on-one and consulted on curriculum design for both online and face-to-face courses. Although I often felt that instructors did benefit from working with me and my colleagues, I was not confident that everything we did was effective in terms of helping instructors develop their instructional expertise and helping students learn more. To become a more effective practitioner, I wanted to explore the literature of instructional development in a systematic way. Since much of the research literature in academic development is situated in universities, I chose to focus at that level of practice.

## **1.2. Current practice, history and literature**

Although this study of the research literature on initiatives for instructional development focuses on the period 2000-2009, it is important to situate it in the current practice of the field and its history.

### 1.2.1. Current practice

Current practice in instructional development occurs in multiple locations and is viewed in a wide variety of ways. Some researchers (for example Åkerlind, 2005, 2007; Briggs, 2007; Carusetta & Cranton, 2005) write about academic development as a process that occurs through the practice of teaching in a particular context, rather than through specific initiatives focused on instructional development; this accords with a recent shift in views of the acquisition of professional expertise from a focus on development to a focus on learning (Webster-Wright, 2009). These views of learning to teach as a situated process contrast with ideas of instructional development as a way of overcoming deficits among academics: specifically, of a perceived lack of expertise in teaching, sometimes felt to be the result of a university system that prepares researchers but not teachers at the doctoral level. This deficit or remedial model of development is based on an assumption that teachers in post-secondary education in some way “need fixing,” (McAlpine, 2006, p. 123) and that instructional development is the fix. Others suggest that at least in instructional development for medical education the shift is towards increasing pedagogical content knowledge (Shulman, 1986), with initiatives designed to help participants teach specific types of specialized content and reflecting changes in medical practice (Skeff, Stratos, & Mount, 2007) rather than initiatives designed to enhance teaching skills which are assumed to be generic.

In Canada, instructional development initiatives are often designed and delivered by centralized teaching support units<sup>1</sup>. Many of these units provide services for Teaching Assistants (TAs) as well as for faculty members, and frequently they provide classes and workshops in support of both face-to-face and online teaching. The University of British Columbia (UBC) Centre for Teaching, Learning and Technology is an example of a large and robust centre active in all of these areas. The Centre was created by combining two earlier separate initiatives, the Centre for Teaching and Academic Growth and the Office for Learning Technologies. Their programs include initiatives open to graduate students and faculty (including workshops in course design and instructional skills), initiatives open only to faculty (including academic leadership programs for new department heads

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<sup>1</sup> The Society for Teaching and Learning in Higher Education (STLHE) reported a total of 39 centralized units at universities across Canada in their 2011 database. A further 19 centres were located at colleges and other post-secondary institutions. The database was retrieved Nov. 25, 2011 from <http://www.stlhe.ca/constituencies/educational-developers-caucus/edc-centres-database/>.

and an ongoing program for pre-tenured faculty), and initiatives specifically focused on the use of technology in teaching face-to-face or at a distance. The centre also supports UBC's Institute for the Scholarship of Teaching and Learning (ISoTL), and provides assistance to faculty members in the use of educational technology and the preparation of online courses. The Centre is not the only location for instructional development in the university. UBC's Faculty of Medicine maintains a separate office of academic development, which specializes in preparation and support for those teaching in clinical settings<sup>2</sup>. In addition to these initiatives, UBC launched the Carl Wieman Science Education Initiative in 2006, a five-year project aimed at improving undergraduate science instruction at the university; since its focus is on disseminating and adopting "what works" in science education, it includes an academic development focus.<sup>3</sup> This is not an exhaustive list of development opportunities at UBC. As in other universities, there are also other opportunities for formal and informal learning with peers within departments and faculties. The intention with this summary is not to single out UBC, but instead to provide an example that illustrates the financial and staff commitments universities make in this area as one indication of the importance of academic development. UBC is a large university, and its commitment to academic development reflects this. There are, however, similar initiatives at many other universities.

### **1.2.2. The history of university academic development**

Formal academic development of any kind is a new phenomenon in the history of universities, dating back in most cases less than fifty years. In this section, the history of the field will be briefly outlined, and several tensions within it identified. These include tensions inherent in contrasting philosophies underlying the field, as well as tensions that have arisen in response to differing views of university teaching.

In Canada and the United States, two philosophic influences are clear in the early development of academic development practice: the influence of humanist philosophies interpreted through writings about adult education, and the influence of

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<sup>2</sup> The Centre's website is [http://www.med.ubc.ca/faculty\\_staff/faculty\\_development.htm](http://www.med.ubc.ca/faculty_staff/faculty_development.htm) .

<sup>3</sup> The Initiative's website is <http://www.cwsei.ubc.ca/> .

behaviourist psychology through systematic instructional design (Wilcox, 1997<sup>4</sup>). There have also been concurrent foci on the evaluation of teaching, and its enhancement. In part, this dual focus reflects the influence of student protests in the 1960s against perceived poor university teaching, something experienced in North America and elsewhere (Gaff & Simpson, 1995; Lee, Manathunga, & Kandlbinder, 2010; Wilcox 1997).

McGill's Centre for Learning and Development was launched in the late 1960s; other large universities in central Canada launched teaching and learning centres at a similar time. Frequently institutional concerns with quality of teaching followed student-led initiatives for teaching evaluation, according to the educational developers Wilcox interviewed for her 1997 monograph on the history of educational development in Canada. The Canadian Society for Studies in Higher Education (CSSHE), founded in 1969, included a focus on university teaching in part in response to these concerns.

By the early 1980s, there was a strong enough tradition of academic development in Canada to support the founding of the Society for Teaching and Learning in Higher Education, which held its first official conference in 1984 (Wilcox, 1997). The number of academic development centres of various types also increased through this period, though the process was not entirely smooth. Some centres in Ontario, funded by a provincial funding program (the Ontario Universities Program in Instructional Development) and opened in the 1970s, closed when the program ended in 1980. By the 1990s, however, academic development centres were fairly well established in Canadian universities coast to coast.

This progression has not been entirely uncontested. Following Barnett (1994), Wilcox (1997) identifies tension between technical/operational and academic views of competency in teaching, two competing views which she feels have been present in the field at differing levels since its beginning. Summarising Barnett, she notes:

The academic form of competence, explains Barnett, is built around a sense of mastery within a discipline, while the operational conception of

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<sup>4</sup> Wilcox notes that in Canadian universities "instructional development" and "faculty development" are the most commonly-used terms; she chooses to use the term "educational development," since "the overall intention of this work is to improve the quality of education through a development process..." (Wilcox, 1997, p. 11).

competence reflects a wider societal interest in performance (especially economic performance, i.e., efficiency). The two rival definitions of competence are based on alternative interpretations of basic ideas about skills, communication, learning, evaluation, and epistemology, and reflect different sets of beliefs, values, and interests<sup>5</sup>. Barnett states that the relationship between universities and society is changing; as a consequence, the older academic definition of competence, in which notions of understanding, disciplines, and truth have been central, is being displaced by the operational version of competence which is characterized by a focus on technical know-how, instrumentality and practical effectiveness. (p. 25)

This echoes findings of Australian researchers and oral historians Lee, Manathunga and Kandlbinder (2010), who identify a theme of political activism among students and academics in the early years of academic development. They note, “The earliest advocates for reform of teaching and learning in Australian universities were closely engaged with students in their attempts to address issues of the quality of teaching. As a result, student activism had important links with the emergence and evolution of academic development, especially in the UK and Australia” (p. 314). This situation has changed, in Australia and elsewhere, as academic development has become more closely associated with ideas of quality and accountability – ideas associated more strongly with what Barnett (1994) calls the operational view of competence, rather than with ideas of activism for reform (Lee et al. 2010). The change documented in Welch’s 2009 study of the evolution of government policy in higher education in England since 1979 supports this. Her evidence shows that, “...successive governments established increasing central control over the higher education system and mobilised it to meet goals compatible with government interpretations of the national interest” (Welch, from the abstract). Clegg (2009b) goes further, describing academic development in the economic north (using the UK and Australia as her examples) as an established practice performed by academic developers as “corporate agents directed towards changing the valuation of teaching and teaching practices” (p 57). She contrasts this with academic development in South Africa, where strong historic links exist between anti-apartheid activism and academic development, and where the field has a strong focus on curriculum changes and accessibility.

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<sup>5</sup> Centra’s 1976 survey of faculty development initiatives in the United States identified four major types of initiatives that could be viewed as representing these differing interests: sabbaticals leave funding, and initiatives lead by senior faculty that arguably suggests support for an academic definition; assessment of teacher quality and instructional assistance from specialists that can be seen as based in a more operational view.

In the United Kingdom academic development is very much a formal part of the university, since the adoption of the 1997 Dearing Report has made it compulsory for universities to provide some form of initial teacher training for new faculty. Although centres for educational development had existed in the UK as early as the 1960s, they became much more common after the Dearing report. In the UK, many of the centres (over 75%) report to a senior administrator responsible for academic affairs, or specifically for teaching and learning. Frequently academic development centres, or at least the heads of the centres, bear some responsibility for crafting or contributing to institutional policies on teaching and learning; this perhaps reflects as much as anything the government imposition of national policies to which universities are required to conform. In the UK another tension is apparent: the tension between providing assistance to faculty, and providing quality assurance services on behalf of university administration (Gosling, 2009).

Although it is not the role of this project to explore the history of academic development, the various tensions inherent in the field are apparent in the research into practice which is the focus of this meta-study. These political and historical observations may represent different tensions; they may simply represent different manifestations of the tension described by Barnett (1994) as being rooted in differing interpretations of competence. This will be discussed in Chapter 4 in the consideration of instructional development as a field.

### **1.3. Literature review: Examinations of the literature of practice**

Since the early 1980s, several different authors have reviewed the literature of practice in instructional development. The reviews have been conducted for a variety of purposes: to determine what is effective in practice in general; to determine what is effective in a specific field (for instance, medical education); to support specific approaches to activities for teaching enhancement; and to identify trends in the field. Three of the reviews were conducted systematically (Kennedy, 2007), and these will be addressed first.

Kennedy (2007), in her discussion of reviews and their role in defining literatures, states that systematic reviews are distinguished by the concerted effort researchers conducting such reviews make to find *all* existing empirical research relevant to their

question; the inclusion of all possible research means that systematic reviews can provide accurate overviews of the state of research in a field. As she notes, systematic reviews are not the only type of reviews, and not the only useful type. Other types of reviews – she mentions integrative, theoretical, methodological and historical reviews – can also be useful. To situate this research study, I begin by discussing three systematic reviews of the instructional development literature. Since a goal of this study is also to explore strengths and weaknesses in the field of instructional development, I have also examined several other reviews (not systematically conducted) whose focus is on trends in the field.

By Kennedy's definition, I am aware of three systematic reviews of the literature of practice in instructional. These are:

- Levinson-Rose, J., & Menges, R.J. (1981). Improving college teaching: A critical review of research. *Review of Educational Research*, 51(3), 403-434.
- Steinert, Y., Mann, K., Centeno, A., Dolmans, D., Spencer, J., Gelula, M. & Prideaux, D. (2006). A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education: BEME Guide No. 8. *Medical Teacher*, 28(6), 497-526.
- Stes, A., Min-Liveveld, M., Gijbels, D. & Van Pategem, P. (2010). The impact of instructional development in higher education: the state-of-the-art of research. *Educational Research Review*, 5, 25-49.

Steinert et al. reviewed faculty development for teaching enhancement specifically in medical education. The other two reviews are of the literature of instructional development in higher education generally, and include initiatives aimed at teaching assistants as well as faculty members.

Several other reviews (not systematically conducted) of related literature were conducted in the same period. The most frequently-cited of these, done by Weimer and Lenze in 1991, was conducted as an update of the Levinson-Rose and Menges 1981 review. Other reviews have described the evolution of academic development over time (Gaff & Simpson, 1994), identified aspects of academic development thought to be most effective (Emerson & Mosteller, 2000), and identified trends in the evolution of academic development (Foley, Redman, Horn, Davis, Neal; & Van Riper, 2003; Skeff, Stratos,

Mygdal, Dewitt, Manfred, Quirk, Roberts, & Greenberg, 1997; Skeff, Stratos, & Mount, 2007; Steinert, 2000) Each of these reviews help to describe the landscape of academic development in which this study is situated.

I will begin this section with an examination of the three systematic reviews, considering the strengths and weaknesses of each. I will then consider other reviews, with a particular focus on those that have been cited by other researchers in this field. Finally, I will conclude this section with a consideration of instructional development as a research field, informed by the work of the reviewers.

### **1.3.1. Levinson-Rose and Menges: the earliest review**

The Levinson-Rose and Menges (1981) review was the first systematic examination of the instructional development literature. Levinson-Rose and Menges both worked at Northwestern University's Center for the Teaching Professions, where Menges was the Director. Four of their decisions – to focus only on initiatives aimed at improving instruction, to include only those that reported some level of evaluation, to organize the initiatives according to type of initiative, and to aim their review at both researchers and practitioners – set a pattern for subsequent reviews.

#### **1.3.1.1. Research purpose and inclusion criteria**

Levinson-Rose and Menges did not specifically articulate a research question in their review, but they made their intentions clear:

For more than a decade, the movement for faculty development and instructional improvement in postsecondary education has generated projects, research reports, and conferences. Many campuses support activities to benefit faculty and in turn to enrich the education of students. This paper critically reviews research evaluating their impact. First, we assess the methodological soundness of these studies and suggest how they might be improved; second, we identify implications for the design and conduct of teaching improvement programs. (p. 403)

Their inclusion criteria began with a consideration of the evaluation of each reported initiative. Noting that all initiatives shared the intention that, as a result of the intervention, teachers would change what they do, they focused on the types of change that could occur as a result of an instructional development initiative. They categorized data indicating evidence of this change in five categories:

- change in teacher attitude from self-report
- change in teacher knowledge from tests or observer
- change in teacher skill from observer
- change in student attitude from self-report
- change in student learning from tests or observer reports

The reviewers felt that the strongest evidence of teacher change was provided by the final two categories, indicating that student learning had changed. The weakest category was the first: simple reporting of teacher attitude from the teacher's own reflections. Levinson-Rose and Menges excluded this category from their study, including only studies that reported at a minimum changes in teacher knowledge based on test or observer reports. Although they defined the domain of their study as instructional improvement in postsecondary education, they did not apply this strictly as part of their inclusion criteria. Instead, they noted: "Interventions developed with pre-college teachers, for example, microteaching, are discussed when they hold promise for higher education" (p. 404).

#### **1.3.1.2. Review methodology**

Levinson-Rose and Menges reviewed 71 reports that they claimed were "representative of research since the mid-sixties" (p. 404). Their reports included peer-reviewed papers, conference presentations and doctoral dissertations. Although they do not describe the process they used to search the literature, nor provide a list of the journals or other sources they consulted, they did clearly make an attempt to include all relevant documents, and hence it is reasonable to term this a systematic review. Among other steps taken, prior to the publication of this review they produced an ERIC occasional paper (Levinson & Menges, 1979), reporting on their findings to that point and asking readers to provide them with research reports they may have missed.

The reviewers summarized each of the reports they included, noting author(s) and date, design, participants, unit of analysis, duration, dependent variables and results. They also assigned what they called a "somewhat impressionistic" confidence rating to each study, though they do not specifically document the process of assigning ratings:

Randomized studies using two or more groups generally earn greater confidence than studies using one group pre-to-post. Our framework for considering validity follows Cook and Campbell's (1979) four categories: statistical conclusion validity, internal validity, construct validity, and external validity. Usually we give more weight to internal than to external validity, although all threats to validity are considered. (p. 404)

From this description, it seems that their level of confidence was connected to both methodology and results.

### **1.3.1.3. Review findings**

Levinson-Rose and Menges identified five types of interventions designed to improve instructional skills:

- grants to support faculty projects
- workshops and seminars
- feedback from ratings by students
- practice with feedback: microteaching and mini-courses
- concept-based training: protocol materials

In each section of their findings they described the type of intervention and summarized results of studies where it was used. They found no examples of evaluation in the use of grants to support faculty projects or concept based training with protocol materials, and included them in the review because they were common (in the case of grants) and because they were useful for teacher training at other levels (for protocol materials). The reviewers did find evaluated examples of workshops, initiatives involving feedback from ratings by students, and micro-teaching.

Twenty studies of workshops and seminars were included in their review, of which 17 were workshops or seminars for graduate teaching assistants. They reported some evidence of changes in teacher attitude, and some changes in teacher skill.

They found several examples of studies where the intervention involved sharing results from student ratings of instruction at midterm with instructors, then comparing these ratings with feedback provided by the same students at the end of the term. The reviewers noted: "... these studies provide more evidence for than against the effect of feedback on end-of-term ratings, but many are flawed" (p. 411). In most cases, the focus

of the studies they cited was on seeing if student ratings improve, rather than seeing if student learning improved in connection with higher rating of instructors. They did discover one study that "...found that students of teaching assistants who received feedback with consultation scored higher on a standardized final examination and indicated greater interest in taking future coursework in that subject" (p. 414). The participants in this small study were teaching assistants rather than faculty members. Otherwise all results seem to focus on increase in ratings themselves, rather than increase in student achievement.

Levinson-Rose and Menges found three examples of the use of microteaching and mini-courses at the post-secondary level. They wrote:

In programs for elementary and secondary teachers, microteaching and mini-courses provide for the practice of teaching with feedback. These strategies also show promise for improving college teaching. (p.414)

Two of the studies, involving instructors of dentistry (16 participants) and community college instructors (14 instructors), showed improvement in aspects of teaching after microteaching with feedback. The third study was not a typical initiative; it involved randomly-assigned graduate students as instructors, with pre- and post-test ratings by psychology students. This is far from a standard teaching situation, and results are not very likely to generalize to the experience of faculty members.

#### **1.3.1.4. Conclusions and implications**

Levinson-Rose and Menges concluded:

This review was undertaken to determine what conclusions might be drawn from studies on improving college teaching both for researchers and those who design and implement instructional improvement programs. The relevant literature is larger than we expected and of lower quality than we hoped. (p. 417)

The reviewers raised several points of concern for both researchers and practitioners. The first of these concerns program evaluation and the value of faculty development initiatives. Although they found that most comparisons supported the initiatives (in 78% of cases by category), the studies in which they had the most confidence indicated the least support for the initiatives studied.

The weaknesses Levinson-Rose and Menges note in the field itself are of most significant interest to current researchers. They found the basis in theory strained or in some cases non-existent, the terminology ill-defined, design problems frequent and the field fragmented, in that it is based mostly on single studies. They identified four implications for researchers from the review, encouraging researchers to:

- pay more attention to individual variation, rather than treating participating faculty as an undifferentiated mass.
- pay more attention to operationalization and definition of variables, to allow for aggregation and comparison
- perform collaborative “clinical trials” at multiple campuses, rather than only single-campus studies
- focus not only on superficial experience, but deeper cognitive, emotional and development experiences (p. 418-419).

#### **1.3.1.5. Strengths and weaknesses of the review**

The greatest strength in the Levinson-Rose and Menges review lies not so much in the review itself, as it is in their discussion of the state of the field in 1981. There are strengths in the review process as well; Levinson-Rose and Menges made a great effort to find and include studies that used all kinds of techniques for instructional development. They appear to have done a comprehensive examination of the literature up to the end of the 1970s, and provide a clear view of the field to that point.

There is no discussion of the theoretical underpinnings of instructional development initiatives in this review, and little exploration of definitions of effective teaching. This lack of emphasis on theory may indicate the lack of such an emphasis in the research literature studied; the reviewers are experienced as both researchers and practitioners in the field and since they do not note the absence of this emphasis, they might not have expected to find it.

Although this review appears to have been systematic in terms of the effort the reviewers made to find research on instructional development initiatives, there are some inconsistencies in the reporting. The most striking are in the categories reported. The reviewers include both grants and concept-based training/protocol materials despite not finding examples where these types of initiatives had been evaluated. This lack of

evaluation may indicate problems with the categories themselves. As the reviewers themselves note, grants may "... purchase material, pay personnel, support travel, permit consultation with instructional developers, or provide released time or summer salary" (p. 405). The existence of grants does suggest an institutional willingness to support academic development, but it does not seem useful to define a category of initiative purely on the basis of funding source. There are not necessarily any commonalities between any two grant programs or even two projects funded by a single grant program; one may be very successful while another is quite unsuccessful, both for reasons that have nothing to do with the source of program funding. In this, grants are quite different from the other categories the reviewers reported.

Levinson-Rose and Menges also included protocol materials ("films or videotapes illustrating educationally relevant concepts," p. 416) among the promising initiatives they recommend for faculty development at the post-secondary level, although they did not find any examples of such materials used in post-secondary faculty development. They had seen examples of the use of such materials in precollege studies, and felt they would be helpful and perhaps less intimidating for instructional development than practice-based programs. The inclusion of this type of intervention in an article positioned as a critical review of existing research on post-secondary teaching illustrates a weakness in the review; while it is certainly useful to imagine alternative approaches, it is inaccurate to identify them as part of the existing literature.

Levinson-Rose and Menges conclude by listing guidelines for assessment of workshops. The guidelines, extrapolated from research into evaluation, were seldom followed in the research they investigated. They are worth noting in part because they are so coherent. The guidelines state:

(1) both immediate and delayed tests should be made, since without opportunity for continuing practice-with-feedback the post course level of skill mastery is likely to decline; (2) if participants' self-assessments are to be accurate, they should refer to specific behaviors, those behaviors should have been assessed during instruction, and participants should have had opportunity to compare their performance with an external criterion; (3) finally, if sessions aim at attitude change and if they are evaluated through participants' self-reports, the sessions should include exercises or discussions that ensure active encounter with a variety of views held by other members. (p. 410)

It would be reasonable to expect subsequent researchers to follow these guidelines in their own workshop evaluation; this does not in fact seem to be the case. This is a concern for the field of faculty development as a research field. To build a coherent, identifiable field of research, surely suggestions such as these, based on a review of the existing literature, should not be ignored, and studies in the field should build on earlier works. This shortcoming will be discussed further in the concluding chapter.

Levinson-Rose and Menges chose to include initiatives designed for teaching assistants as well as those designed for faculty members. Including studies where graduate students are the faculty development participants raises several questions. It is not possible to tell from the review whether the graduate students were experienced or inexperienced teachers. More importantly, it isn't possible to tell from the review how much of the teaching role the graduate students were fulfilling. It is not clear if they were planning courses, or simply marking or delivering instruction based on a senior professor's plans (perhaps the more likely scenario). It is not clear if they participated in the session voluntarily or if the activities were a condition of employment. Given differences in both experience and responsibilities, experienced faculty and inexperienced graduate students might have different reactions to similar workshops. Previous experience with teaching may inform the extent to which participants are willing or able to try new approaches, and in this the two groups may be very different. It is also reasonable to assume that faculty, with their likely more complete view of the components of teaching, may have different concerns than graduate students who may only be doing part of the task. This decision therefore weakens the review as an overview of the impact of workshops for instructional development, since 19 of the 20 workshops included were designed for teaching assistants.

### **1.3.2. Steinert et al.: Faculty development for medical education**

This 2006 review focuses on a particular population: those who teach in medical education. This strongly influences methodology and inclusion criteria. The study was based on 53 articles reporting on instructional development for teaching effectiveness. This was a truly international study; papers reviewed came from the US, Canada, Egypt, Israel, Malta, Nigeria, the UK, Switzerland and South Africa. Like Levinson-Rose and Menges (1981), this group examined the research by type of intervention, including

workshops, short courses, seminar series, and finally longitudinal programs and fellowships, which they considered together. They evaluated the success of each type of intervention using Kirkpatrick’s (1979) model for evaluating educational outcomes, adopted by the Best Evidence Medical Education (BEME) collaboration earlier and modified slightly by these researchers. (See Table 1.1.) This model is compatible with that used by the Levinson-Rose and Menges and provides additional detail.

**Table 1.1 Levels of evaluation -- Steinert et al.**

Level 1	<b>REACTION</b>	Participants’ views on the learning experience, its organization, presentation, content, teaching methods, and quality of instruction
Level 2A	<b>LEARNING</b> —Change in attitudes	Changes in the attitudes or perceptions among participant groups towards teaching and learning
Level 2B	<b>LEARNING</b> —Modification of knowledge or skills	For <i>knowledge</i> , this relates to the acquisition of concepts, procedures and principles; for <i>skills</i> , this relates to the acquisition of thinking/problem-solving, psychomotor and social skills
Level 3	<b>BEHAVIOR</b> —Change in behaviors	Documents the transfer of learning to the workplace or willingness of learners to apply new knowledge & skills
Level 4A	<b>RESULTS</b> —Change in the system/ organizational practice	Refers to wider changes in the organization, attributable to the educational program
Level 4B	<b>RESULTS</b> —Change among the participants’ students, residents or colleagues	Refers to improvement in student or resident learning/performance as a direct result of the educational intervention

*(Steinert et al., 2006, p. 501)*

### 1.3.2.1. Research purpose and inclusion criteria

The review team identified their research question clearly. Their initial purpose in conducting their systematic review was:

To synthesize the existing evidence that addresses the question: “What are the effects of faculty development interventions on the knowledge,

attitudes and skills of teachers in medical education, and on the institutions in which they work?" (p. 497)

As their research progressed, they added additional questions:

- What characterizes the faculty development activities that have been described?
- What are the methodological strengths and weaknesses of the reported studies?
- What are the implications of this review for faculty development practices and ongoing research in this area?

The reviewers began by defining instructional development following Centra's 1978 definition: "... that broad range of activities that institutions use to renew or assist faculty in their roles."<sup>6</sup> They identified several other reviews of instructional development in medical education. They commented on these other reviews:

Notably, none of the above authors conducted a systematic review of the literature, and none of the reviews followed a predetermined protocol. In addition, few reviews considered the impact of faculty development on the organizations/institutions in which individuals work. (p. 498)

The authors did not cite any reviews of the literature of instructional development conducted outside of instructional development for medical education.

The inclusion/exclusion criteria for the review are stated explicitly. The review includes articles with these characteristics:

- Instructional development focus – "... interventions designed to improve teaching effectiveness" (p. 500)
- Interventions aimed at either basic science or clinical faculty in all areas of medicine; residents and other healthcare professionals excluded (p. 501)
- All study designs, including those reporting results qualitatively or quantitatively
- Published from 1980 to 2002
- Limited to articles in English, French, Spanish and German (p. 500-501)

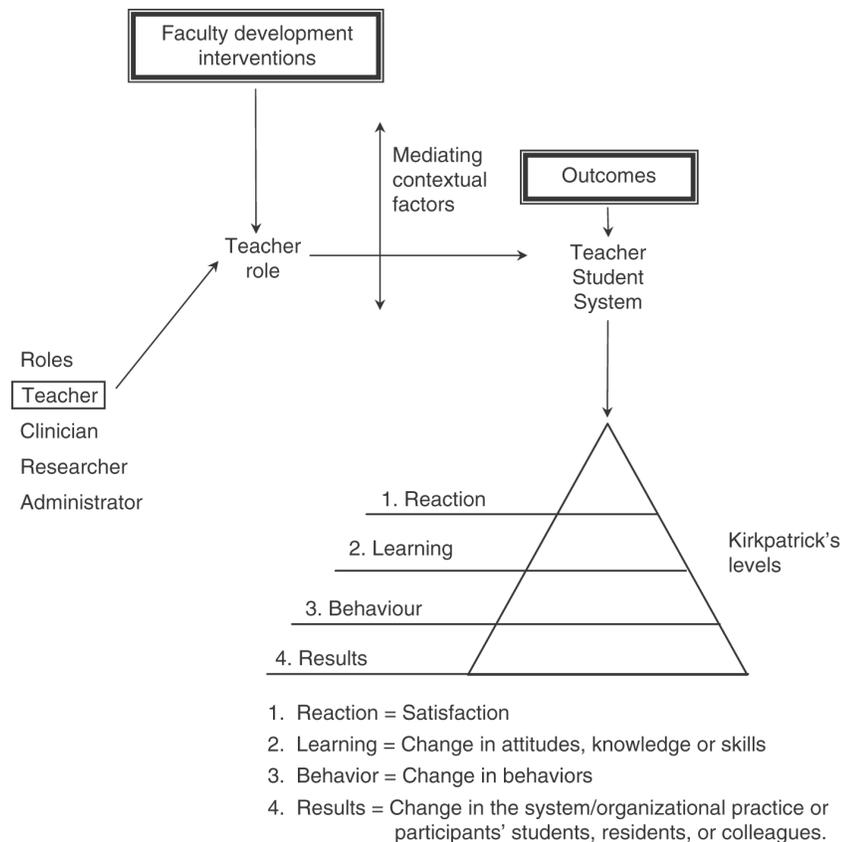
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<sup>6</sup> Both Centra and Steinert et al used the term "faculty development," where I have chosen the term "instructional development.

In addition, the reviewers included only articles indicating evaluation beyond the satisfaction level; that is, at least at level 2A in Table 1.1

Steinert and her colleagues are unique among review teams in that they developed a conceptual framework to guide their review. (See Table 1.3) Their conceptual framework recognizes the complexity of evaluation of instructional development programs. It begins by recognizing the multiple roles of faculty in medical education: as teacher, clinician, researcher and administrator. It recognizes that the instructional development interventions discussed in this review are aimed primarily at improvements in the teaching role, and that mediating contextual factors have an impact on the outcomes. Outcomes themselves can have an impact on the teacher, the student or the system.

**Figure 1.1 Conceptual framework – Steinert et al.**



(Steinert et al., p. 500)

The potential utility of this conceptual framework will be discussed further in Chapter 4.

### **1.3.2.2. Review methodology**

The reviewers followed a previously-devised protocol (the Best Evidence Medical Education (BEME) protocol) for their review. They began by forming a review group including individuals in six countries. All had practical experience in faculty development and medical education. The researchers represent a range of disciplines including clinical psychology (Steinert), education (Mann), educational psychology (Dolmans), medicine (Centeno and Spencer) and medical education (Gelula and Prideux). The review was conducted systematically, beginning with a multi-step process to develop the conceptual framework and identify inclusion/exclusion criteria.

The initial literature search identified 2,777 abstracts. Two reviewers read the initial abstracts, identifying 324 that were related to faculty development and 226 to teaching. An additional 130 articles were discovered by reading the reference list of the 226 articles, and also referring to the lead researcher's files. Two reviewers read all articles to apply inclusion criteria:

Fifty-three articles related to teaching improvement and included outcome data beyond satisfaction ratings. The remaining articles described faculty development programs with no evaluation data or consisted of conceptual approaches to professional development; they were all eliminated. (p. 501-502)

It is interesting to note that even in medical education (where one might expect a stronger focus on evaluation, given the history of clinical trials for treatments and well-established evidence-based approach) many studies were eliminated because they lacked evaluation data. This suggests that in medical education as in less specialized post-secondary education it may be possible to look at the literature as comprising research literature and practice literature.

### **1.3.2.3. Review findings**

Steinert et al. presented their findings systematically, reporting first on descriptions of interventions and their outcomes, then on the methodological quality of the studies they examined. Although they did identify methodological limitations in

studies, they were able to identify several outcomes in the research literature. They noted that satisfaction with programs was high, that the participants felt more positively towards both instructional development and teaching as a result of their participation in programs, that participants reported gains in knowledge and skills, and identified changes in their own teaching behaviours. In some cases, they found that instructional development programs led to changes in organizational practice.

Steinert et al. identified five features that seemed to be common to effective instructional development programs: experiential learning to give participants a chance to apply what they have learned; feedback on teaching; peers as role models and collegial support; adherence to principles of adult learning; and finally the use of multiple instructional methods.

They described the studies' geographical location (72% in the United States), location (most in a university, hospital or community setting, with several offered by professional associations), professional discipline (mostly clinicians), instructional method (a wide array including lectures, discussions, role plays and video reviews) and duration (ranging from one hour to one year). This sets the review apart from the others described; no one else provided this kind of overview of the population of studies included in their review. Like Levinson-Rose and Menges (1981), Steinert et al. considered initiatives by type. They identified four types:

- Workshops
- Short courses
- Seminar series
- Longitudinal programs and fellowships

The review includes reports of 23 workshops. The reviewers found one example of a study that assessed change among participants' students (finding no change in performance) and three where changes in organizational practice were assessed. The authors note that only seven of the workshops provided a theoretical or conceptual framework for their design; they did not identify the frameworks used in their summary. (Nor did they identify the frameworks used in other types of interventions.) Fifteen reports focused on changes in teaching behaviour, mostly evaluated through self-report. The remaining studies reported changes in learning, either in terms of skills or attitudes.

Six of the interventions were short courses, ranging in duration from one week to one month. All but one were based on a theoretical framework. In terms of evaluation, one study tracked dissemination activities in the participants' home institutions (an example of Level 4a evaluation – see Table 1.1), four collected data related to behaviour (in two cases reported as taking on teaching in new areas) while others reported changes in learning, either in terms of skills or in attitude.

Ten seminar series were described, eight of which were based on a theoretical framework. Four of the ten reported a positive impact on attitudes and perceptions, while two assessed knowledge and skills and reported an increase in both. Seven studies reported changes in behaviour; in four of the studies, these changes were reported by students rather than just by faculty. Three reports of changes in the organization (Level 4 – see Table 1.1) were included.

One longitudinal program and four fellowships were included. All but one had a theoretical framework. The participants in the longitudinal study reported positive changes in attitude towards teaching. They also reported increased learning (particularly change in the use of educational terms) and in educational roles (as they took on increased responsibility). Changes in behaviour and in knowledge were also reported in the studies of fellowships, as were changes in educational role.

#### **1.3.2.4. Conclusions and implications**

The reviewers identified several key features in successful instructional development programs, although they stated that it was difficult to tease apart which factors were of the greatest significance. The factors include:

- The role of experiential learning
- The value of feedback
- The importance of peers
- Adherence to principles of teaching and learning
- The use of multiple instructional methods to achieve objectives

The authors make several intriguing observations about the instructional development interventions they examined. First, they note that the role of context is

critically important. Many of the successful interventions were organized in response to specific circumstances, and thus it is not hugely surprising that they were successful.

One lesson to be learned from this observation is that context is key, and that although the results of these studies may not be generalizable, the principles of faculty development may be. (p. 519)

Steinert et al. identified some concerns with study methodology. They note a need for more rigorous design, both qualitative and quantitative. They also note the importance of both outcome measures and, surprisingly given the contempt in which “happiness scales” have been held in the past, attention to participant satisfaction.

It is time to re-affirm the value of participant satisfaction data. Although reaction to the program is an elementary level of evaluation, it is fundamental for change to occur. Participant satisfaction is important if faculty members are to be motivated to learn and to attend professional development activities. It also gives valuable feedback to program planners. (p 520)

They note that it is important to focus on shift bias; in this case the tendency of participants to rate their skills higher than justified at the beginning of the intervention, and more accurately (and lower) after the intervention is over. They also note the importance of assessing change of time, comparing strategies, collaborating across programs and grounding instructional development in both theory and practice.

Like other reviewers, this team concludes with implications for both practice and research. The first need they identify for research is for more rigorous studies using control or comparison groups, and qualitative studies. In addition, they urge researchers to:

- Carry out process-oriented studies as well as outcome-oriented ones
- Continue to use performance-based measures of change
- Triangulate data
- Assess and report the validity and reliability of instruments
- Recognize that interventions occur in complex environments
- Compare different methods
- Assess change over time
- Develop systematic approaches to assessing the impact of faculty development on institutions

- Use conceptual and theoretical frameworks
- Collaborate with colleagues outside of medicine, as well as within it

They encourage practitioners to:

- Build on existing successes
- Use theory and educational principles to develop programs
- Acknowledge the importance of context
- Develop more long programs
- Develop programs that stimulate reflection and learning
- Consider requiring participation, rather than relying entirely on voluntary participation

These recommendations echo many of those made by Levinson-Rose and Menges in 1981 and foreshadow some made by Stes et al. in 2010, suggesting that some of the challenges in the literature are similar whether one considers literature within medical education or elsewhere.

#### **1.3.2.5. Strengths and weaknesses of the review**

The Steinert et al. review benefits greatly from developments in systematic review methodology since Levinson-Rose and Menges' earlier work. The reviewers provide a clear audit trail for the studies they include, and give the reader confidence that the review is complete.

More significantly, this review is the first to place instructional development initiatives in the broader context of faculty members' work. In particular, the reviewers recognize that instructional development initiatives are only one factor influencing the development of instructional abilities, suggesting that the success of initiatives aimed at instructional improvement are influenced by a variety of mediating contextual factors.

Although it is not a weakness, it is a limitation of the review that only instructional development initiatives for medical education were included. The conceptual model in particular seems useful for a broader context. This model can be seen as a graphical illustration of where instructional development initiatives can have an impact. While this is a strength in terms of the focus of this review, the assumptions inherent in the conceptual model (with its emphasis on initiatives and its labelling of context as

“mediating contextual factors,” might in fact be a detriment to the broader field of academic development). This idea will be explored in Chapter 4.

### **1.3.3. Stes et al.: Focusing on the outcomes**

Stes et al. (2010) conducted the most recently-published systematic review of the instructional development literature. They chose to categorize the 36 articles they reviewed according to the level of outcome the research reported, and the methodology used for research, rather than by type of intervention. They included research reports where only the impact on individual teachers (with no mention of impact on students, department or institution) was recorded. They report their findings in three broad categories: studies measuring impact on teachers, on institutions, and on students. The reviewers included literature published between 1977 and 2007, a thirty-year period. Thus this study overlaps with part of the period considered by Levinson-Rose and Menges.

#### **1.3.3.1. Research purpose and inclusion criteria**

The reviewers identified three inclusion criteria. Studies were included if they:

- Reported on instructional development initiatives in higher education
- Focused on the effect of the initiative
- Reported systematically on the gathering and analysis of empirical data

The primary question asked by this review is, “What is the nature (in terms of levels of outcome) and design of instructional development research in higher education?” (p. 28). Four additional research questions contrasted the effectiveness of instructional development in pairs of situations (p 28):

- Initiatives extended over time versus one-time events
- Collective, course-like initiatives versus other initiatives (such as research grants and peer learning)
- Initiatives intended for new faculty and/or teaching assistants versus open to everyone
- Initiatives targeting a discipline-specific group versus discipline-general initiatives

### 1.3.3.2. Review methodology

Since Stes et al. based their review on an examination of the outcomes of instructional development initiatives, it was important for them to use a robust framework for determining the level of outcome. They chose to base their work on the framework refined by Steinert et al. (2006), which was in turn based on Kirkpatrick (1979). They excluded consideration of participants' reactions to the initiatives, since they felt that those reactions did not add to their understanding of impact. Their description of levels of outcome is reproduced as Table 1.2.

**Table 1.2 Levels of evaluation -- Stes et al. <sup>7</sup>**

Level	Description
<i>Change within teachers</i>	
Change in teacher attitudes	Change in attitudes towards teaching and learning
Change in teacher conceptions	Change in conceptions (i.e., in ways of thinking about) teaching and learning
Change in teacher knowledge	Acquisition of concepts, procedures and principles
Change in teacher skills	Acquisition of thinking/problem-solving, psychomotor and social skills
Behavior	Transfer of learning to the workplace
Instructional impact	Wider changes in the organization, attributable to the instructional development initiative
Change in students' perceptions	Change in students' perceptions of the teaching and learning environment
Change in students' study approaches	Change in students' approaches to studying
Change in students' learning outcomes	Improvements in students' performance as a direct result of the instructional development

*Stes et al., p. 29*

To find the studies they included, the researchers conducted a search of ERIC using keywords “instructional development,” “instructional training,” “academic development,” “faculty development,” “faculty training,” “professional development,” “educational development,” “educational training,” “staff development,” “pedagogical training,” and “university teacher,” adding the proviso that the word “teaching” had to

<sup>7</sup> Note that Table 3.9 compares the language and levels of evaluation between these reviews and Kirkpatrick's original 1979 scale.

appear in the abstract. They read the abstracts of the 1,833 citations that resulted, rejecting most of them, and ultimately identifying 80 studies for follow-up. To be included, studies had to concern an instructional development initiative in higher education and report it as a central object of the study, and had to include empirical data. In total, they included 36 studies in the review. They did not limit the source of studies, and included nine unpublished conference papers and research reports as well as 27 published journal articles. The studies were dated between 1977 and 2007, and all are identified in the review's references. Each was coded for information about outcomes, research design, instructional development initiative implemented and results. Three of the researchers did the coding; each worked independently after an initial period of calibration, and consulted each other when necessary.

#### **1.3.3.3. Review findings**

Findings were reported according to outcome: first those reporting change in teachers; then those reporting change in institutions; and finally those reporting change in students.

Of the 36 studies, 27 reported change in teachers learning in various ways: attitudes (16 studies), conceptions of teaching (8 studies), knowledge (12 studies) and skills (13 studies). Thirty-one studies reported changes in teachers' behaviour.

Although one might expect significant use of observation or analysis of videotape in analysis of initiatives that report changes in teacher behaviour, Stes et al. did not find this. Two of the twelve quantitative studies used Trigwell and Prosser's (1996) Approaches to Teaching Inventory (ATI) to analyse change in behaviour; the inventory is self-reported, and is a measure of teachers' conceptions of teaching perhaps rather more than their behaviour. Two studies relied on observation by educational developers and others. One asked students to rate teachers on a series of competencies. Most others relied on pre- and post-tests of participants to report behavioural change. Of the additional 18 qualitative and mixed-methods studies, two involved analysis of teaching videotapes.

Thirteen studies reported changes in participant skills. Five of these studies were identified as quantitative. None of these used a comparison or control group, although four did report pre-test data. Most surprisingly, of the five studies, four of the quantitative

studies were entirely based on self-report of skill improvement – including one that identified an increase in awareness of teaching problems as a skill. Five studies were identified as qualitative. In most cases, the qualitative nature of the research appears to be mostly analysis of interviews in which participants reflect on their increases in skills. One study reported changes in the skill levels of teaching assistants who had participated in instructional development, reporting that based on supervisors' observations, their teaching ability, presentation skills and ability to evaluate students had improved. Three studies used mixed methods (both qualitative and quantitative). In one case, a survey reported that a third of respondents felt their instructional skills had improved, and this was confirmed by interview data. (The reviewers do not comment on the experience of the other two-thirds.) In another reported study, an analysis of participant comments in a post-initiative focus group made it clear that they felt their skills had improved; however, a critical thinking test after the instructional development activity showed no difference between their skills and those of a control group. The final mixed-method study determined that program participants had increased their ability to analyze educational encounters, based in part on the judgement of experts.

Stes et al. reported 12 studies that indicate impact on students. Of these twelve, seven studies reported changes in students' perception of the teaching and learning environment rather than indicating change in students' abilities. (Arguably these could be classified as indications of changes in teacher behaviour, rather than changes in students.) Four studies reported on the impact of an instructional development initiative on students' study approaches. One of these indicated that students used technology to complete class work, one found that students whose instructors had participated in an instructional development program worked collaboratively more than those in a control group, and one found a decrease in surface approaches to learning in comparison to a pre-test (without finding a concurrent increase in deep approaches). The single qualitative study of learning approaches used logs kept by teaching assistants, who reported a community of learners developing in their classes, but the survey did not report data from students themselves.

Eight studies examined the impact of instructional development on learning outcomes achieved by students. Of these, only one used a control or comparison group. One study reported quantitative changes in student retention and average grades; all the other quantitative changes reported teachers' perceptions of enhanced student learning

outcomes, or reported on quantitative changes such as increase of technology-focused master's theses. One mixed-method study involved a written pre-test and post-test of students' critical thinking skills after their teachers participated in an instructional development initiative; this study did show improvements in students' critical thinking abilities.

Nine studies reported an institutional impact resulting from an instructional development initiative, though this impact was sometimes modest. For example, a mixed-methods study "revealed that 57% of the 68 participants in instructional development mentioned increased meetings of new colleagues outside their own discipline. Interview data supported this finding" (p. 41). Seven qualitative studies reported somewhat more significant instances of curriculum changes, dissemination of teaching materials, development of spin-off activities and increase in interdisciplinarity.

#### **1.3.3.4. Conclusions and implications**

The reviewers concluded that instructional interventions over time had more positive behavioural outcomes than one-time events; that collective, course-like initiatives had fewer behavioural outcomes but more outcomes at the level of students; and that the impact of discipline-specific initiatives was comparable to the impact of discipline-general initiatives. The researchers did not find enough initiatives targeting teaching assistants or new faculty to determine whether or not they had more impact than initiatives open to everyone. The reviewers identified several opportunities for future research; they state that many of the comments made by the earlier reviewers (including both Levinson-Rose and Menges (1981) and Steinert et al. (2006)) were still relevant now, thirty years after the first systematic review. Many of these suggestions are for improved methodology and research design. For example, beginning with Levinson-Rose and Menges, reviewers have been calling for evaluation that includes a focus on participants' teaching behaviour after an initiative, rather than simply on self report; for more completely-realized qualitative research studies; and for more experimental or quasi-experimental designs including control groups. Stes et al. add an additional recommendation: that researchers describe in more detail the instructional development initiative they are researching. As they note, this would make it easier to design studies that build on others in the field.

The reviewers' decision to review studies by level of outcome is particularly revealing. Unfortunately, what is revealed is a body of research that is less sophisticated than one would hope. Although the researchers did discover studies where behavioural change was reported, in most cases the evidence was simply participant self-report. Some changes in student learning were reported, but in most instances the changes reported were changes in student ratings of instructors, rather than change in their own accomplishments. The most frequently-reported institutional change was at the level of networking with those from other departments. It is perhaps telling that, although they searched ERIC from 1977 to 2006, they were still only able to find 36 studies that matched their inclusion criteria.

#### **1.3.3.5. Strengths and weaknesses of the review**

Stes et al. conducted a truly systematic review, clearly reporting their criteria, adhering to their inclusion criteria and providing a clear audit trail for articles they selected. Their decision to report results by outcomes of initiatives rather than by type of initiatives is another strength. In particular, this reporting method draws attention to weaknesses in the field which will be discussed more in Chapter 4.

Although it is not a focus of this review, the absence of external evaluation of teaching behaviours, when that is purported to be the focus of evaluation, does raise some concerns about the rigour of the research reported. Certainly Stes et al. are accurate and careful in their reporting of studies. However, it is disappointing to note that only one of the thirteen studies focused on participants' skill improvement reports observation of the skill in practice as part of the evaluation of learning. To the extent that this indicates a weakness in the review, it is that Stes et al. do not explore the idea of weaknesses in the field itself in much detail. In part this represents a limitation of systematic review methodology, as Kennedy identified (2007). The reviewers adhere carefully and entirely to their inclusion criteria, a strength that gives their review credibility; they do not look beyond what is included to note what is missing.

#### **1.3.4. Other reviews: 1990-present**

The three systematic reviews described above provide a good overview of the findings of empirical research in instructional development from the late seventies almost to the present. The Steinert et al. (2006) and Stes et al. (2010) reviews in particular

construct strong frameworks for their examination of instructional development in medical education and in other areas, respectively. In a sense, it seems that the frameworks are stronger than the research they support. Both reviews, like the Levinson-Rose and Menges (1981) review, reveal weaknesses in the findings they report. This is most obvious in the Stes et al. (2010) review, where the focus is specifically on level of outcomes. Few studies demonstrated more than modest improvements, and many of the improvements were measured by various types of self-report.

The systematic reviews alone, however, do not give a complete picture of the landscape of instructional development. Instructional development is an applied field, and although research has always had a place in it, both researchers themselves and practitioners refer to other types of overviews and reviews of publications in the field to situate their own work. Often the general purpose of these reviews is to report highlights of the literature for the benefit of practitioners, whether those practitioners are faculty developers, or college and university administrators. These reviews are not systematic. Although some are based on empirical research, others are closer to what Kennedy would describe as reflections of the lore of the field rather than its research base.

Kennedy describes the knowledge within any field as being made up of three layers:

First, there are the primary studies that researchers conduct and publish. Next, there are reviews of those studies, whether systematic or conceptual, that provide summaries and new interpretations built from but often extending beyond the original literature. Finally, there are the perceptions, conclusions, and interpretations that people share in informal hallway conversations that become part of the lore of the field. This third layer is the one that most scholars actually believe to be true, but it can have a relatively loose relationship to the primary studies and even to the literature reviews. (Kennedy, 2007, p. 141)

This evaluation of the literature, or perhaps of the scholars who read it, may seem harsh, yet as an examination of other reviews shows, it is not unreasonable to apply it in this case. Most of these overviews are written in support of a particular argument or point of view, identifying patterns within the literature and suggesting directions for the field or for particular practitioners. The review process followed, however, is not transparent; it is not usually possible to determine how the conclusions

were reached and the direction recommended determined. Despite the weakness in the methodology of their reviews, they are included here because they form an important part of the landscape of the field. One of the reviews (Weimer & Lenze, 1991) was cited the most frequently of all articles by research studies conducted outside of health sciences. Others, by virtue of their intended audience, may have considerable impact on practice.

Weimer and Lenze (1991) described their review as an update of the work of Levinson-Rose and Menges (1981), and they identified many of the same weaknesses the earlier review had discussed. They directed their review towards practitioners, researchers and institutions, noting that, “Institutions need to know which resources and activities most positively effect instructional quality...” (p. 653). Their review is frequently cited; in this meta-study, it was the most frequently cited article among studies set outside health sciences, and according to ISI Web of Science has also been cited widely by other articles in academic development<sup>8</sup>.

The Weimer and Lenze review was not systematic; the authors did not make a concerted attempt to discover every possible example of research on faculty development for teaching enhancement. Instead, they began examining the results of surveys of faculty development, including that completed by Centra (1976), to determine the most popular types of instructional development initiatives. Their approach makes it possible for them to use the literature of practice (in this case, surveys of practice) to discover trends in types of initiatives, and then to find research studies that illustrate each type. However, the reviewers do not explain how they found the examples of research studies that they did include, nor do they provide a list of the studies they examined. This makes it difficult to determine the extent to which their conclusions represent the field.

Like Levinson-Rose and Menges, Weimer and Lenze categorized faculty development initiatives by type and reported on five categories of faculty development interventions: workshops, seminars and programs; consultation; grants for instructional improvement projects; resource materials; and colleagues helping colleagues. They included the final three categories despite not finding examples of studies evaluating them, and reported only inconclusive findings for the other two categories.

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<sup>8</sup> ISI Web of Knowledge search conducted July 16, 2011.

Weimer and Lenze, like Levinson-Rose and Menges before them, emerged from their review project seemingly somewhat disappointed with the literature, emphatically stating: “Empirical evidence establishing the effect of these interventions on faculty classroom behaviors and learning outcomes simply does not exist” (p. 675). They note a need for more research, more evaluation and generally more sophisticated design of research studies, but in addition identified some difficulties researchers could face in evaluating initiatives:

The call of this review for more rigorous empirical inquiry is not new. It has been made previously. Why are these interventions not being studied? First, as previously noted, those who use them are not qualified to complete the needed research agenda. Those with the qualifications may be avoiding the research because these are not easy phenomena to study. Researchers seldom have access to faculty subjects and even those who do quickly learn how difficult it is to “require” faculty to do anything. Moreover, the interventions themselves are difficult to study. Many intervening and confounding variables cloud results. It is easy to understand, by comparison, why the plethora of research on student evaluation continues. There vast quantities of data can be collected in much more tightly controlled environments. The study of instructional interventions requires field research with all its confounding logistical liabilities. (p. 678)

Their conclusion echoes one of the conclusions of all three systematic reviews: the idea that rigorous evaluation of specific initiatives will translate into an increase in the effectiveness of those initiatives for instructional development, presumably through improved approaches and design. Weimer and Lenze are unique in their call for field research, with its inherent focus on context. The importance of context, and the difficulty of using evaluation research as the basis for study in this field, will be discussed extensively in Chapter 4.

The Weimer and Lenze article is significant largely because of the extent to which it has been cited, and therefore influenced the field in general. The article by Kang and Miller (2000), by contrast, is an example of a review article aimed at a specific audience. The authors made no attempt to conduct a systematic review, and do not indicate how they decided what articles to include. They state:

This discussion makes no attempt to cover the entire gamut of faculty development literature, but rather, provides a highlight of some of the references that are particularly valuable to the student of higher

education, the faculty development professional, and the administrator with cause to be concerned about faculty performance. (p. 3)

The authors are both administrators: a program coordinator and an assistant dean. They appeal to their administrative colleagues by noting:

A college or university's faculty is often a common criterion for determining institutional prestige and quality. ... A logical investment, then, is in the tools that enable faculty to perform their jobs better. With a potentially stronger and more capable faculty, the argument subsequently can hold that students learn more and perform better. (p. 4)

The review makes the connection between academic development activities and improved student performance without providing actual evidence for that connection. This kind of assumed connection, particularly when accepted and promulgated by the administrators who are the audience for the review, is an example of what Kennedy (2007) describes as lore within a field.

Other review articles are clearly intended to contribute to the conversation on a particular topic. For example, Boening and Miller (1997) summarized a collection of largely first-person accounts of the value of sabbatical leaves, concluding that those who support the value of sabbaticals as part of faculty development will increasingly be called upon to explain their value to the institution as accountability pressures grow. A group of self-described faculty development practitioners, reviewed the use of reflective processes in programs for new practitioners and found that some of the changes anticipated in the programs were not seen across cohorts (Kahn, Young, Grace, Pilkington, Rush, Tomkinson, & Willis, 2008). Others focus on teaching in a specific location. Maxwell and Kazlauskas (1992) reviewed faculty development initiatives aimed at community college teachers in the United States, concluding that although there were some promising approaches, participation was low and research support for initiatives not strong.

One of the most interesting reviews is the historical overview by Gaff and Simpson published in 1994 and used by later reviewers Emerson and Mosteller (2000) as a framework for their own review. Gaff and Simpson attempted to identify overall directions of the faculty development field over the past 30 years using an informal historical approach. In the earliest period, they state, prior to the 1970s, faculty

development meant developing expertise in the discipline. The student unrest of the 1960s and 1970s prompted a change:

Student protests during the late 1960s and early 1970s attacked irrelevant courses and uninspired teaching. Since the protests took place at universities with the greatest concentration of leading scholars, they exposed the myth that all that is required to be a good teacher is to know one's subject. (p. 168)

Academic development in the 1970s was in part a response to these complaints, they maintain, focusing on the teaching role. More recently the authors view academic development as including a focus on institutional development, faculty teaching, and the administrative/structural environment. It is intriguing to consider this historical evolution; certainly it does seem logical that the situation of higher education itself and evolving views of its role would have a strong impact on the way in which faculty developers respond. Although Gaff and Simpson provide little documentation for their claims, they are supported by others writing about the same era (Lee et al., 2009; McAlpine, 2006; Wilcox, 1997); all these examples, though, are largely anecdotal reports of the evolution of the field. However, it is possible to see the impact of a discussion like Gaff and Simpson's in subsequent work and alarming to note that they do not explain how they reached the conclusions they did about the evolution of the field.

Emerson and Mosteller (2000) conducted a review published in the 2000 *Educational Media and Technology Yearbook*, the purpose of which was to guide media and technology professionals in their practice. They framed their research in two ways: with reference to the Levinson-Rose and Menges (1981) systematic review and with reference Gaff and Simpson's (1994) overview of the evolution of faculty development. They reported their findings by categories: interventions by consultants/facilitators; workshops/seminars/courses; mentoring programs; and action research. In each type of initiative reported, the authors found and presented examples that supported their general views of the characteristics of successful instructional development. They identified what they termed patterns in the findings that lead to success.

From our review of recent empirical research, we have identified three patterns in the findings. Faculty development 1. Is successful when it is collegial; 2. Benefits from making use of extended intervention, over a full semester, a year, or more; and 3. Has greater impact when it is focused and concrete. Having a specific task to address helps. For example, a

consultant may aid a statistics teacher in using computer simulation to help clarify a point of confusion identified in student ratings. (p. 29)

Although the researchers described their work as empirical, and did cite examples of particular studies, it is not possible to determine from the review if the reviewers read the literature specifically looking for these factors, or if they identified the factors based on their reading of the literature. Emerson and Mosteller cite the complaint by Levinson-Rose and Menges that few workshops are adequately evaluated. They find no evidence that this changed through the 1980s and on into the 1990s, the time period they are mostly addressing. Despite these problems, the authors conclude that: “Workshops, seminars and courses which: are *interactive*; involve *sustained engagement* of the faculty; and include a *focus on concrete matters* relevant to the individual faculty member’s needs seem likely to give benefits” (p. 34: emphasis in original).

However, they do not provide clear examples of workshops that do or do not do this, nor do they provide a rigorous examination of successful examples. As Kennedy (2007) notes, it is important not to critique a review simply because it is not a systematic review; many types of reviews have their place and value. In this case, though, the reviewers have not provided an adequate description of the way in which they drew their conclusions. This is a significant weakness, since these “unifying threads,” as the reviewers call them, form the background for subsequent examinations of all types of initiatives. The findings could potentially be useful, particularly for practitioners, but they are not well supported. Further, Emerson and Mosteller base their work in part on the two earlier reviews (Gaff & Simpson, 1994; Levinson-Rose & Menges, 1981) without distinguishing between the two; each is cited as significant and in a way that indicates it is well supported. Yet one, Gaff and Simpson’s work, provides little empirical data supporting its conclusions, while the other is a careful systematic review of the state of the literature. Emerson and Mosteller’s review can be seen to provide an example of the way lore can develop within the field.

Another aspect of the review literature in academic development consists of the various attempts to identify trends within the field, typically to inform future practice. For example, instructional development in medical education and elsewhere in health sciences has been reviewed several times with this direction-providing purpose in mind.

Stratos, Bergen, Albright, Skeff and Owens (1997) reviewed the literature of faculty development for clinical faculty, identifying approaches felt to be successful and identifying barriers to participation, many of them institutional and involving lack of recognition for participation. In 2000, Steinert provided an overview and synthesis of recommendations from numerous other summaries of academic development and some primary research reports. Her basic argument at that time was that in medical education, it was time to move beyond purely the development of teaching skills and include administrative, leadership and academic/scholarly skills, reflecting what she identified as an increasingly complex role of medical educators. Writing in 2003, Foley, Redman, Horn, Davis, Neal and Van Riper similarly worked to identify trends in academic development, in their case, for nursing faculty. They identified changing definitions within academic development literature.

Earlier definitions focused primarily on the development of faculty as teachers while more recent definitions present a comprehensive approach that addresses the full range of faculty roles and responsibilities. The contemporary view of faculty development focuses on the individual faculty member as teacher, scholar, professional and person. (p. 228)

The article identifies two themes in the literature: mentoring, and the changing development needs of faculty as they move through career stages. Based on a survey of faculty at their university, they recommend professional development, instructional development, leadership development and organizational development. In 2007, Skeff, Stratos and Mount reported another overview project, analysing the major emphasis of academic development articles included in Medline at five-year intervals from 1970 to 2005 by conducting a key-word search and content analysis. They found an increase in articles on teaching methods and general teaching improvement, and in recent years a focus on specific teaching topics. Interestingly, they cited the earlier Steinert review (2000) and noted the call there for more integrated vision of academic development; they did not find evidence of that development, however, based on their search of patterns in citations.

#### **1.4. Instructional development as a field of research**

As my research progressed, I became interested in the strengths and weaknesses of instructional development as a field of research. In part my interest arose

through the process of identifying research studies which matched my inclusion criteria. (See Section 2.5 in Chapter 2 for a discussion of these criteria.) Like other reviewers, I found fewer articles than I expected which could truly be identified as empirical research. This dismayed me since my initial interest was in discovering what research showed to be the most effective approaches to instructional development. It was my intention as a practitioner to go beyond what Kennedy (2007) called the “lore” of the field – “the perceptions, conclusions and interpretations that people share in informal hallway conversations” (p. 141) – and discover what the empirical research actually reported.

I am not aware of any extensive discussion of instructional development as a research field. Clegg (2009a), in her broader discussion of academic development practice within universities, identifies academic development as part of the broader field of higher education. As she notes, this field is itself a location for struggle in the last few decades as universities have undergone rapid change. Clegg characterizes academic development as a new profession in this context, and notes that academic developers work in a state of tension involving several components: universities’ increasingly instrumental focus on teaching enhancement; the profession’s tradition of claiming to work from the perspective of students; and the desire by academic developers themselves to view and be viewed by other academics as peers.

My research is not intended to be a complete evaluation of the position of instructional development within this broader context. Rather, it was my intention to consider what the literature can tell us about the strength of the research that investigates the development of instruction, and what it might suggest for both research and practice. These possible directions can, I believe, be identified by considering both what the research literature on instructional development includes and what appears to be absent. None of the reviews of literature discussed above identify precisely what they mean by the “field” of instructional development or academic development research. However, in reviewing the recommendations from each of the systematic reviews, it is possible to identify characteristics that the reviewers suggest would identify a robust field. As discussed above, each review concludes with some recommendations for research. Four of the recommendations are shared in all three reviews (Levinson-Rose & Menges, 1981; Steinert et al., 2006; Stes et al., 2010):

- recognize the complexity of the environments where research occurs

- build on other research in the field
- use a variety of research approaches
- triangulate data, using more than one source

The recommendations are intended to provide guidance for individual research projects. They are also useful as a way to think about a body of research. In a well-developed research field, one could expect to find research conducted using a variety of research approaches and data reported based on more than one source. In an applied field like instructional development, one could expect to see a focus on the environments where the research will ultimately be applied. In addition to these elements, one might expect to see evidence of a dominant paradigm within the research and to see research which works within the paradigm and is variously intended to determine significant facts, match those facts with theory and further articulate the theory (Kuhn, 1962). I did not expect to find that research in the field had achieved all these goals; if it did, the reviewers would not still be making the recommendations. As part of my research, however, I considered these elements of a mature research field as applied to instructional development. My reflections on these elements are included in Chapter 4.

## **1.5. Next steps: a meta-study of the instructional development literature**

Based on this discussion of the review literature in instructional development, how will a further review add value to the field? There are several ways in which more examination is needed.

Thus far, there has been no systematic review that focused exclusively on university faculty. Both Levinson-Rose and Menges (1981) and Stes et al. (2010) included research studies aimed at instructional development for teaching assistants and other graduate students, rather than only faculty. In fact in the Levinson-Rose and Menges' review, the great majority of workshops examined (19/20) were designed for teaching assistants. Levinson-Rose and Menges also included post-secondary institutions besides universities (e.g., community colleges). Steinert et al. (2006) specifically excluded residents from their review of instructional development for faculty in medical education, but they included clinical faculty. They did not clarify whether or not these faculty members were full-time faculty, working in the context of higher

education always, or if they were clinicians with teaching duties. It would be helpful to understand the impact of instructional development initiatives for university faculty specifically, given their specific professional role.

Both the systematic reviews of the instructional development literature outside of health sciences covered long periods, dating back to the 1970s. There is merit in conducting a review that focuses on more recent developments in the field.

There are other, perhaps even more compelling, reasons for a review of the literature of instructional development for university faculty. Two of the earlier systematic reviews of the instructional development literature (Levinson-Rose & Menges, 1981 and Steinert et al., 2006) focused exclusively on the findings of the studies they included. Although they determined that there were some weaknesses in the findings, they did not explore the methodological reasons behind these weaknesses, nor did they discuss the design of the initiatives they were reporting on. The most recent systematic review of the instructional development literature (Stes et al., 2010) goes beyond these earlier reviews and does include a focus on methodology rather than simply on findings. None of these reviews explore the studies they examined in much depth; none discussed the design of the initiatives themselves in any detail, nor did they explore the source of the educational ideas that underpinned the various studies. To understand not just the impact of instructional development initiatives, but the shape of the field itself, this kind of exploration is needed. In a field marked by fragmentation and criticized for various types of weakness (of methodology, of lack of theory and of academic rigour generally), there is a need for a systematic meta-study that focuses on university faculty and looks beyond study findings and considers both the rationale for instructional development initiatives and the way they are studied. Meta-study methodology, an approach to meta-synthesis of qualitative research that allows for the examination of theory, methodology, and findings, is an appropriate choice for this kind of examination and is the methodology used in this study. The methodology itself is discussed in Chapter 2, and further justification for its use is provided.

## **2. A META-STUDY OF THE LITERATURE OF RESEARCH ON PRACTICE: METHODOLOGY**

This chapter explains the reasons for choosing meta-study methodology for this analysis of the instructional development literature. The chapter begins by positioning meta-study methodology in the context of other types of second-order studies – that is, studies which take as their data source other empirical studies, and combine these primary studies in some way to produce findings. The second part of the chapter describes the specific steps taken to complete this meta-study. This second part follows the six steps identified by Paterson, Thorne, Canam and Jillings (2001) for completion of a meta-study, and outlines the process followed for each step.

### **2.1. Why meta-study?**

Meta-study methodology is particularly well suited for an examination of the literature of instructional development practice. Earlier reviewers of this literature have suggested that findings of many studies are weak, and that there are ongoing weaknesses in study design and conceptual base (Levinson-Rose & Menges, 1981; Stes et al., 2010; Weimer & Lenze, 1991). Meta-study methodology, because its holistic approach includes analysis of the rationale for primary studies (in the form of theory or other references to the literature) as well as analysis of methodology and findings, provides a way to go beyond these complaints to determine why the weaknesses exist. In addition, other second-level study methodologies, summarized in the following section (Section 2.1.1), tend to focus exclusively on findings. This limits the extent to which they can explore the methodologies used in the field (either for research or, in the case of instructional development, for the design of initiatives) and the ideas from the literature which inform practice. Meta-study methodology was designed for the study of qualitative research studies; however, it is flexible enough to allow for incorporation of other types of research, including the evaluation research that is common in the field of instructional development. In this section, I consider the various approaches to second-order studies, and outline the advantages of meta-study for this particular body of literature.

### 2.1.1. Second-order studies

A meta-study is a particular type of second-order study. Most second-order studies focus exclusively on either quantitative or qualitative research, rather than a combination of the two.

Second-order studies that focus on quantitative research are usually called meta-analyses. The purpose of a meta-analysis is to combine quantitative data from multiple studies of the same phenomenon and calculate effect size using this larger, assembled, database (Glass, 1976). Meta-analysis has a long tradition, especially in medical research, where it has formed the basis for what is called “evidence-based practice.” The application of meta-analysis techniques to medical research developed as a way of ensuring that practitioners made practice decisions based on accurate and systematic interpretation of all available research findings from clinical trials, rather than idiosyncratic interpretations of only some findings (Cochrane, 1972). Meta-analysis forms the basis of work conducted by both the Cochrane Consortium<sup>9</sup> and the Campbell Collaboration, two international research groups dedicated to the application of evidence-based practice in health care and health policy (in the case of the Cochrane Consortium) and in education, as well as in the fields of crime and justice, international development and social welfare (Campbell Collaboration).

The systematic review of qualitative research, by contrast, is often referred to by the general term “meta-synthesis” (Bondas & Hall, 2007). There are various approaches to qualitative meta-synthesis originating from many fields, including sociology (Noblit & Hare, 1988; Ritzer, 1990; Zhao, 1991, 1996) and nursing (Barbour & Barbour, 2003; Morse, 2006; Sandelowski, Docherty & Emden, 1997).<sup>10</sup> Some of these approaches are designed for the synthesis of research conducted using specific methodologies; meta-ethnography, for instance, allows for synthesis of ethnographic research. Many focus on ways to combine study findings from various types of qualitative research, to determine what is known about a particular research question according to the qualitative research literature generally. Meta-synthesis, like qualitative research generally, has typically not contributed to the development of evidence-based practice as championed by the Campbell Collaboration and Cochrane Consortium, since these groups originally

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<sup>9</sup> Both the Cochrane Consortium (<http://www.cochrane.org/>) and the Campbell Collaboration (<http://www.campbellcollaboration.org/>) maintain extensive websites.

<sup>10</sup> For a good summary, see Bondas and Hall, 2007.

considered experimental, quantitative research as the most, if not the only, significant type. These views have begun to change. Although both the Campbell and Cochrane Collaborations continue to value experimental research most highly, recently the Cochrane Collaboration has held seminars for those who are synthesizing qualitative research as part of their review of effectiveness.<sup>11</sup> Similarly the Campbell Collaboration's 2009 colloquium included discussion of qualitative meta-synthesis within Campbell systematic reviews<sup>12</sup>.

Paterson, Thorne, Canam and Jillings (2001) developed meta-study methodology partly as a means of ensuring that the results of qualitative research could contribute to professional health care practice, thus making an early contribution to this work. In describing the development of the approach, they wrote:

Our chronic illness research team came to realize that although much insider perspective research existed in our various substantive areas, its contribution to our practice as health care professionals was difficult to discern. We identified the need to extend the analysis of individual research studies beyond the domain of conceptualizing individual experience to incorporate within that analysis an understanding of larger contextual issues such as dominant health systems beliefs and ideologies. (p 4)

Their focus is not on a simple answer to the question "what works," but rather on a consideration of why and how particular approaches to healthcare are effective in particular contexts. As researchers they feel that merely synthesizing findings is not enough, since this "excludes consideration of the highly significant ways in which theoretical, methodological, or societal contexts have shaped those reported results" (Paterson et al., 2001, p 5). Other outcomes of meta-study can include development of midrange theory, expansion or development of theoretical frameworks, and contributions to policy. The connection to practice is not lost: "[Meta-study] can support practitioners in their interpretation of qualitative research findings so that this knowledge may be incorporated into practice" (p 14).

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<sup>11</sup> "Qualitative research methods group announcements," <http://www.cochrane.org/news/blog/qualitative-research-methods-group-announcements>, retrieved August 2, 2011.)

<sup>12</sup> "Qualitative Meta-Synthesis within Campbell Systematic Reviews: Expanding the best possible evidence base for future policies and programmes," [http://www.campbellcollaboration.org/artman2/uploads/1/Saini\\_Qualitative\\_Meta-synthesis.pdf](http://www.campbellcollaboration.org/artman2/uploads/1/Saini_Qualitative_Meta-synthesis.pdf), retrieved August 2, 2011

All second-order studies involve the formulation of a research question, the selection and appraisal of research and the synthesis of findings. Meta-study includes two further steps: a meta-method analysis, and a meta-theory analysis (Paterson et al., 2001). It is this systematic examination of theory and methodology as well as findings that makes meta-study a particularly useful approach for examining the research literature of instructional development. From the earliest systematic review of the instructional development literature, reviewers have commented on specific weaknesses in the literature as a whole. For example, a common criticism is that many studies stand alone, without making reference to others. A need for improvements in methodology has consistently been called for, as has more extensive use of qualitative research, more rigorous evaluation of the initiatives reported, and a stronger conceptual basis for the research (Emerson & Mosteller, 2001; Levinson-Rose & Menges, 1981; Stes et al., 2010; Weimer & Lenze, 1991). These identified weaknesses point to issues in both methodology and theory in the field. Considering methodology and theory helps to create a more complete map of the territory to make sense of this field, its evolution and direction. It allows for consideration of not only what is known about instructional development (through the synthesis of research findings) but also how it is known, and how researchers in the field frame their knowledge and provide evidence of their understanding.

Much of the practice literature in instructional development is a mixture of descriptive statistics, thematic analysis of textual data collected from interviews and open-ended questionnaires, and other types of analysis all used as a means to evaluate the effectiveness of specific initiatives. Thus to synthesize research in the field, it is necessary to use an approach that can incorporate these various types of research. Meta-study includes a focus on the examination of methodology and this is useful because it allows for discussion of the weaknesses in methodology that other reviewers have suggested are a problem in the field of instructional development. An examination of methodology includes, for the evaluation-focused literature in instructional development, an examination of the nature of the evaluation findings. Only one of the systematic reviews described in Chapter 1 (Stes et al., 2010) gave attention to an examination of methodology; they categorized research by methodology type (quantitative, qualitative, or mixed methods) and considered research in these categories. Their main concern with methodology, however, was with the way the

research methods were used. They identified ways in which both qualitative and quantitative research could be more rigorously designed to measure the impact of instructional development initiatives, but did not question the value of an evaluation approach to further development of the field.

Another focus of meta-study is on theory, providing a means to track the use of theory through the literature, determining if there are patterns in the theories drawn on by different studies and considering the connection between study approach and findings. Theory has not been a strong focus in earlier systematic reviews of the instructional development literature. For example, the three systematic reviews, discussed in Chapter 1, (Levinson-Rose & Menges, 1981; Steinert et al., 2006; Stes et al., 2010) examined instructional development interventions according to the type of intervention, including an array of interventions ranging from workshops to the provision of literature to one-on-one consultations with faculty developers. Their focus is on study findings; they did not focus on or identify the rationale for the design of the interventions they studied.. The lack of discussion of theory underlying the design of the interventions makes it impossible for the reader to interpret the findings fully or, more broadly, to track the theoretical development of the field. Levinson-Rose and Menges noticed this absence, pointing out that conceptual work on ideas that could form a basis for theories of instructional development had not been done at the time of their 1981 review:

A well-defined field of inquiry should draw upon coherent theory, subscribe to high standards of research, and build upon previous research in a systematic way. By these criteria, research on improving college teaching is not a well-defined field. For most studies, the basis in theory is strained and for some it is nonexistent. Work on major conceptual issues remains; for example, before programs can be validated, we must clarify the nature of "instruction" and the meaning of "improvement." Such concepts are seldom explicitly defined in this literature and implicit definitions strike us as inappropriately narrow. (p. 418)

Consideration of the theory underlying studies to be synthesized is thus an important step in this meta-study. The inclusion of a focus on the theory, methodology and findings of each study helps reduce decontextualization of study findings. This may be the way in which meta-study methodology is most different from other research synthesis approaches.

The focus on all three aspects (methodology, theory and findings) makes meta-study methodology the most appropriate approach to examine not only the findings reported in the primary studies in the instructional development literature, but also the shape and nature of the field itself. In an applied field like instructional development, findings alone are not sufficient. As an applied literature, the literature of instructional development must be of use not only to researchers but also to practitioners who work with university faculty in their attempts to enhance university teaching. An understanding of the rationale for the faculty development initiatives (revealed through a meta-theory examination), and an understanding of the way in which those initiatives have been studied (revealed through meta-methodology study) is necessary for a deeper understanding of the work of instructional developers.

## **2.2. Limitations of the study**

There are limitations to this study related both to the literature itself, and to the research process.

### **2.2.1. Limitations of the literature**

Sandelowski and Barroso (2002) write extensively about the importance of separating adequacy in procedure (the way in which studies are conducted) from adequacy of reporting (the way they are reported), and note that inadequacy of reporting can be a result of external constraints such as article length rather than weakness in research. Adequacy of reporting was an issue in this study, and reduced the number of initiatives that could be included. Some reports of initiatives are brief and do not explore theory or methodology in as much depth as would be optimum. To overcome this difficulty, I sought additional accounts of the research reported where possible. For example, a MacDonald (2001) article ultimately included in my database referenced the report of an evaluation of the initiative reported. I used Google Scholar to find this evaluation report and read the article and the report together as part of my data collection process<sup>13</sup>. Where it was not possible to find additional information, and the

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<sup>13</sup> Final report to Committee for University Teaching and Staff Development (CUTSD). Project title: First year engineering education: Developing a culture of teaching and learning. Organisation: Swinburne University of Technology. Higher Education Division, John Street, Hawthorn, Victoria. 2000. Retrieved March 15, 2009 from <http://admin.carrickinstitute.edu.au/dspace/handle/10096/456>

information provided was insufficient to provide a clear understanding of the initiative and the research, I excluded the studies.

### **2.2.2. Limitations of the period of review**

Largely for practical reasons, the period reviewed in this meta-study is confined to the decade from 2000 to 2009. This is a limitation, since it might be possible to see trends in theory, methodology and findings over time if a longer period had been addressed. Gaff and Simpson (1994) identified four phases in faculty development, from a focus on disciplinary knowledge in the 1950s and 1960s, to a focus on teaching expertise in the 1970s, to a focus on curriculum in the 1980s, and finally to a combination of all three components in the 1990s. They did not provide empirical evidence for their perception of change, and it would be interesting to see if there is evidence supporting their interpretation of change over time. Restricting this research to a single decade means that this pattern of change over time could not be confirmed or rejected, nor could an alternative pattern be identified.

The decision to restrict the meta-study to initiatives primarily concerned with instructional development, rather than academic development more broadly (including roles in addition to teaching) could be considered another limitation of the study.

The meta-study is also limited by the decision to include only research studies reported in peer-reviewed journals. This was done largely for practical reasons, to limit the amount of time devoted to searching for additional literature and also to limit the cost of retrieval. However, since dissertations may include more detail than research reported in peer-reviewed journals, their exclusion may have had an impact on the research. With this in mind, I conducted a scan of the abstracts of relevant dissertations available on the ProQuest Dissertation and Theses database. I noted few doctoral dissertations directly connected to specific instructional development initiatives.<sup>14</sup>

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<sup>14</sup> I searched ProQuest Dissertation and Theses (PQDT) November 8, 2011 for dissertations, using the search terms "higher education" in text AND "faculty development" or "instructional development" in abstract, excluding "community college" -- including and after 2000. I found 89 results, and scanned titles and then abstracts to see if they appeared to be descriptions of initiatives. In total I identified five dissertations that would have been included in my preliminary reading if I had included dissertations. Given the likelihood that at least some of the five would have been excluded during the preliminary reading process, the limitation may not be all that significant.

The process of synthesis itself, and specifically the image of the field that is created through the process, can be considered another limitation of this study. This limitation would apply to any type of review or second-order study. Kennedy (2007) states the problem succinctly:

Each reviewer must decide which specific studies to include or exclude from a review and why. And each such decision alters the character of the set as a whole and could also therefore alter the net conclusions drawn from the set. (p. 139)

Lather (1999) earlier focused more on the potential distortions this could cause: “A review is gate-keeping, policing, and productive rather than merely mirroring. In short a review constitutes the field it reviews” (p. 3).

In the context of this meta-study of the instructional development research literature, what is this gate-keeping function? The initial inclusion/exclusion criteria for this study (see Table 3-2) are largely technical. Studies that were included in this meta-study had to have an adequately-described methodology and include an assessment of effectiveness. This is a meta-study of the literature of practice; it excludes writings about instructional development that are purely conceptual. Since it is a review of the research literature, it includes only study reports that examine an instructional development initiative, and report both method and findings. A gate-keeping role is inevitable given the design of the study; any kind of inclusion criteria would perform this function.

Finally, many researchers involved in meta-study and meta-synthesis have written of the importance of this work being done by seasoned, experienced researchers. Paterson et al. (2001) suggest that meta-study is best done by an experienced team. Since this is doctoral research, it has been conducted by a solo researcher. Every attempt has been made to go beyond simple observation of patterns in data, and to bring to bear the abilities Morse (1999) notes as important: understanding of multiple methods; appreciation for epistemological issues; and scholarly vigilance – however my limited experience with meta-study is acknowledged.

### **2.3. Technical challenges in synthesizing instructional development research literature**

The review process used in the synthesis of quantitative research involves a statistical summarizing: putting together the results of multiple studies to provide a single study. Sandelowski, Docherty and Emden (1997) argue that qualitative research by definition cannot be summarized without doing violence to the research it represents, since findings are strongly dependent on its context. They further argue that the array of theoretical positions, methodologies and intent inherent in qualitative research would render such summarization impossible even if it could be done – but at the same time note that “qualitative research also appears endangered by the failure to sum it up” (p. 366). This “catch 22” besets those who would synthesize qualitative research; there is a danger of losing track of context in the desire to sum up, and at the same time a danger of losing the sense of direction in the field if summing up is not done.

Partly in recognition of the importance of context to qualitative research, second-order studies that include qualitative research are focused more broadly than second-order studies of quantitative research, such as meta-analyses. Because it is assumed that theory, methodology and social contexts shape results, these are considered along with the findings in a meta-study. As Paterson et al. (2001) discovered in their various meta-studies of qualitative research on chronic illness, “how researchers frame chronic illness and their choice of theoretical framework influences the issues they choose to study, the questions they ask about those issues, the designs they create for the research process, their implementation of those designs, and their interpretation of the research findings” (p. 5). A similar situation exists in instructional development: both the researcher’s theoretical framework and the context of the instructional development effort influence the effort at all levels, from design to consideration of effectiveness. Consideration of context, methodology and theoretical framework in this study allows for exploration of the studies beyond the level of simple summaries. As Paterson et al. note:

As a means of building generalizable knowledge from individual qualitative research reports on a particular phenomenon, meta-study offers considerable potential for application to the problems of knowledge development in the human and health sciences. In stark contrast to the traditional critical literature review that any competent researcher would complete prior to engaging in an area of study or to the secondary analysis of actual data sets, meta-study represents a discrete and distinct approach to new inquiry based on a critical interpretation of existing

qualitative research. It creates a mechanism by which the nature of interpretation is exposed and the meanings that extend well beyond those presented in the available body of knowledge can be generated. As such, it offers a critical, historical, and theoretical analytic approach to making sense of qualitatively derived knowledge. (p 47)

Many of the articles included in this meta-study, while they report both quantitative and qualitative data, could more properly be described as evaluation research. This brings its own challenges to the meta-study process; specifically, the methodology in evaluation research is often not described in as much detail as might be the case in other types of research studies, and often there is a focus on what was deemed to be effective – what worked -- rather than a more detailed exploration of what was successful and unsuccessful in a particular initiative. (It is interesting, for instance, that only two studies reported instances where a hoped-for change did not occur.) Beyond the technical challenges, the persistent focus on evaluation has had a major impact in the field and, I argue, has limited its development. This is discussed more completely in the meta-synthesis section of Chapter 3, and in the final chapter.

## **2.4. Laying down a path in walking**

The process of completing a meta-study is to some extent a process of what Francisco Varela called “laying down a path in walking<sup>15</sup>” – the details of the study were decided as it proceeded. The meta-synthesis phase of the project could not be explicitly planned in advance, since it is a synthesis of the results of the meta-theory, meta-data analysis and meta-methodology procedures. In fact, the developers of the methodology deliberately leave this part of the procedure open:

Our own experience working with these processes during several years in the context of a research team has led us to conclude that concretizing and codifying steps for meta-synthesis would probably reduce it to the more simplified processes that are easily described in the literature. Rather, we remain intrigued by the mystery and magic of how knowledge can be inductively derived through the full range of meta-study processes. So, we resist definitive procedural steps and encourage instead a dynamic and iterative process of thinking, interpreting, creating, theorizing, and reflecting. (Paterson et al., 2001, p. 111-112)

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<sup>15</sup> The phrase "laying down a path in walking" is from an article by F. Varela (1992) titled *Laying down a path in walking*. In W. I. Thompson (ed.). *Gaia, A Way Of Knowing: Political Implications of the New Biology* (Hudson, NY: Lindisfarne Press).

The path that I took is documented in the next section, and further discussed in Chapter 3 as appropriate.

## 2.5. Study methodology

This multi-step meta-study of instructional development studies followed the methodology outlined by Barbara Paterson, Sally Thorne, Connie Canam and Carol Jillings (2001). Paterson et al. outline a seven-step process for conducting a health research meta-study:

- Step 1: Formulating a research question
- Step 2: Selecting and appraising primary research
- Step 3: Conducting a meta-data-analysis
- Step 4: Conducting a meta-method analysis
- Step 5: Conducting a meta-theory analysis
- Step 6: Conducting a meta-synthesis of the findings of the analyses
- Step 7: Disseminating findings

This section summarizes the way these steps were applied in the completion of this meta-study. A complete list of the considerations involved in each step as identified by Paterson et al. is reproduced as Table 2-1 for reference. The major steps identified in the first column are discussed individually immediately following Table 2-1, as they apply to this project.

**Table 2.1: The research processes in a meta-study.**

Step 1: Formulating a research question	<ul style="list-style-type: none"> <li>A. Formulating tentative question(s)</li> <li>B. Choosing a theoretical framework</li> <li>C. Generating workable definitions of key concepts under study</li> <li>D. Anticipating outcomes of project</li> <li>E. Refining the question(s)</li> <li>F. Developing evaluation criteria for primary studies</li> </ul>
Step 2: Selection and appraisal of primary research	<ul style="list-style-type: none"> <li>A. Identifying inclusion/exclusion criteria</li> <li>B. Specifying appropriate data sources</li> <li>C. Screening and appraisal procedure</li> <li>D. Retrieving data</li> <li>E. Developing filing and coding system</li> </ul>
Step 3: Meta-Data-	<ul style="list-style-type: none"> <li>A. Identifying analytic strategy</li> </ul>

analysis	<ul style="list-style-type: none"> <li>B. Developing filing and coding system</li> <li>C. Categorizing the data</li> <li>D. Obtaining intercoder consensus</li> <li>E. Discussing and interpreting findings as they relate to research question(s)</li> </ul>
Step 4: Meta-Method	<ul style="list-style-type: none"> <li>A. Specifying methodological characteristics of selected reports</li> <li>B. Elaborating on how methodological characteristics influenced research findings</li> </ul>
Step 5: Meta-theory	<ul style="list-style-type: none"> <li>A. Identifying major cognitive paradigms/schools of thought represented in the theoretical frameworks and emerging theory of reports</li> <li>B. Relating theory to larger social, historical, cultural and political context</li> <li>C. Uncovering significant assumptions underlying specific theories</li> </ul>
Step 6: Meta-synthesis	<ul style="list-style-type: none"> <li>A. Critically interpreting the strengths and limitations of the various discrete contributions to the field</li> <li>B. Uncovering significant assumptions underlying specific theories</li> <li>C. Searching for alternative explanations for paradoxes and contradictions within the field</li> <li>D. Determining which existing theoretical stances are and are not compatible and why</li> <li>E. Proposing alternative theoretical structures within which existing knowledge can be interpreted</li> </ul>
Step 7: Disseminating the findings	<ul style="list-style-type: none"> <li>A. Determining appropriate audiences</li> <li>B. Determining appropriate vehicles for dissemination of findings</li> <li>C. Writing and presenting the findings</li> </ul>

*From Paterson et al., (2001), p. 11. Number and letter references added.*

### **2.5.1. Preliminary study**

As part of the process of completing this meta-study, a preliminary study based on 36 of the articles ultimately included in the complete study was conducted. The preliminary study included meta-theory, meta-method and meta-data analysis, and included articles published between 2005 and 2008. Preliminary study procedures have been noted in the description of the research process that follows where they differed from the complete study. Results of this preliminary study were circulated to my supervisory committee for feedback, and some modifications to the study approach made based on the feedback received. These modifications have been noted throughout the discussion of methodology.

### **2.5.2. Step 1: Formulating a research question**

Formulating the research question, and refining that question, is critical to the completion of a meta-study. Instructional development is an applied field, and this study has an applied focus. The initial goal was simply to determine “what works” in instructional development. This included what approaches are most appropriate, in which circumstances, to enable faculty in higher education to become more effective teachers, assuming that better teaching translates to more effective learning on the part of students. After initial exploration of the field, however, this narrowly-focused question seemed inadequate for a number of reasons. Definitions of “effective teaching” were seldom explicit, and sometimes contradictory. Focusing on student learning seemed like simultaneously a narrowing of focus, and a rather high expectation for frequently-brief instructional development programs and initiatives. Focusing intensely on evaluation of the success of initiatives, something that seems necessary to determine “what works,” seemed particularly limiting. In fact, as the research process continued, I became convinced that the strong focus on evaluation within instructional development research limits what is discussed in the field. (This point is discussed in Chapter 4.) Accordingly, the initial research question was restated as, “What faculty development approaches promote and support effective teaching in higher education?” I felt this was a better question in two related ways. First, by discussing the promotion and support of effective teaching, I hoped to make it clear that I see teaching in universities as something that is often effective – not something that is poorly done and must be fixed by something that “works.” Second, the idea of promoting and supporting teaching suggests that teaching is something that happens within a broad context; it is performed in a space where promotion and support are possible, rather than being a technical skill performed in isolation. Instructional development can support this effort while acknowledging that other factors also contribute to teaching success.

Ultimately, though, I became dissatisfied with this question as well. The lack of a consistent, broadly-accepted definition of “effective teaching” suggested that a question focusing on preparation for effective teaching was problematic. At the same time, both the tradition of systematic reviews and the applied nature of the field demand a focus on the value of research for practice. Accordingly, the research question became, “What is known about the relationship between faculty development approaches and effective

teaching outcomes?<sup>16</sup> This question reflects the tradition of systematic reviews for the improvement of professional practice, where a primary question is, “what works?” It further recognizes that such a simple question cannot always be answered without consideration of context – both the context where the initiatives are undertaken, and the theoretical context in which the instructional developers and researchers work.

The initial intention with the study was to provide a synthesis of the research in the field, and to provide direction for both researchers and practitioners. As the study progressed, and particularly when the meta-synthesis stage was reached, it became clear that identifying assumptions within the field was also important, particularly as a way of guiding further research. The assumptions included three particularly noticeable ideas: 1) the idea that evaluation research, often conducted with little reference to teaching context, could provide insight into the value of a program; 2) the idea that success could best be measured by an examination of change in individuals; and 3) the idea that positive outcomes would always (or at least usually) result from instructional development interventions. The discussion of assumptions is included in the meta-synthesis section, Section 3.5.

The selection of primary research began with the development of criteria for inclusion. The criteria for this study included five factors:

- study participants were university faculty members
- study included empirical data
- study included evaluation of a faculty development initiative
- study included a description of the evaluation
- study was published between 2000 and 2009

No additional evaluation criteria were added during the review process. When studies were excluded, the reason for exclusion was recorded. Beyond ensuring that the inclusion criteria were met, no further evaluation criteria for the studies were specified. The goal with this study was to maintain (in the sense both of establishing and staying within) clear inclusion criteria without narrowing the field unnecessarily (Kennedy, 2007). This proved to be a challenge; many reports of instructional development initiatives are

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<sup>16</sup> A discussion with Dr. Sally Thorne was particularly helpful in the articulation of the research question.

just that, reports, rather than research studies reporting empirical data. The initiatives themselves may be useful and of high quality, but they were not included in this review. Other articles addressed instructional development on a conceptual level, proposing interesting approaches but not providing empirical data. Recognizing this is to recognize the various types of literature within the broadly-defined faculty development literature: a literature of practice, a literature of research based on practice, and a conceptual literature. The focus of this study is the literature of research based on instructional development practice, and these inclusion criteria kept this focus clear.

### **2.5.3. Step 2: Selecting and appraising primary research**

I was a member of a team for another project, and part of the database for this meta-study originated with that project (Amundsen & Wilson, 2012). The creation of that database was a multi-step process<sup>17</sup>. First, ERIC, Google Scholar and Info Psych were searched for peer-reviewed literature published between 1995 and 2008, using the key words instructional development, faculty development, professional development, educational development, academic development, teaching development, higher education and post-secondary education. Conference proceedings, papers and reports, the so-called “grey literature,” from 1997 to 2004 were subsequently sought using the same keywords and added<sup>18</sup>. In addition, the team read all abstracts from 11 journals: *Journal of Higher Education*, *Studies in Higher Education*, *Teaching in Higher Education*, *Higher Education*, *Higher Education Quarterly*, *Adult Education Quarterly*, *New Directions for Teaching and Learning*, *International Journal for Academic Development*, *Higher Education Research and Development*, *Active Learning in Higher Education* and *Innovative Higher Education*. We selected these journals because we knew they were frequent sources of articles on academic development. These steps led to the identification of 3,048 peer-reviewed journal articles, conference papers, proceedings and reports; for convenience all are described as papers in the rest of this section.

All abstracts were read by at least one participant in the research group; if it seemed from reading the abstract that the paper described an academic development initiative, it was read fully. A total of 428 papers were identified.

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<sup>17</sup> I was involved from the beginning in the development of the database for the project, which was led by Dr. Cheryl Amundsen.

<sup>18</sup> The original research project did not have funding for a further search of the grey literature.

In preparing the database for my study, I began with these identified 428 papers. I scanned each of the papers to determine if it matched my inclusion criteria, and identified 168 papers that seemed to match my criteria. My inclusion criteria were somewhat more flexible than those used in the Amundsen project described above, since the Amundsen project excluded papers unless they included a reasonably detailed description of the theoretical/conceptual/ experiential underpinnings of initiative design. I noted this aspect, but did not exclude studies where it was absent. I conducted a keyword search in Eric and Google Scholar to extend the database to 2009, including only peer-reviewed articles, and added an additional 3 articles to the database. Thus, I began my reading with a total of 171 articles.

My reading reduced the number of articles to 73. Twenty-four were excluded because they were published prior to 2000. A further 66 were excluded from the study after complete reading. Of the 66, 35 were excluded either because no specific faculty development initiative was described, or because insufficient detail was provided to understand the initiative. Twenty were excluded since they did not sufficiently describe the initiative’s evaluation, while seven were excluded since the participants were not primarily faculty members; this included reports where participants were community-based medical practitioners who acted as preceptors for medical students, or distance education tutors who did not have responsibility for course planning. The remaining excluded articles included one review of the literature initially identified as describing a specific initiative, one article included in error, and six articles that were additional descriptions of initiatives already included in the database. (These multiple articles were read together, but not counted as additional initiatives.)

Once the articles were identified, I re-read them and took detailed notes. In most cases, I copied sections from the original document to an Excel database for later analysis. In some cases content was summarized. I downloaded the reference list from each article to a separate Excel worksheet, and recorded the ID number of the citing article for each reference recorded. Table 2.2 lists note-taking headings and type of note taken for each.

***Table 2.2 Note-taking headings***

<b>Information recorded</b>	<b>Record format</b>
ID number	Unique identification number generated by

	RefWorks
Reference	APA style
* Additional references reviewed	APA style
Theory underlying approach	Summary or quote from article
Study methodology	Description
Faculty development approach	Summary or quote from article
Study approach	Summary or quote from article
Major findings	Typically quote from article, or summary
Problem statement	Quote from article
Purpose of the research clearly expressed?	(yes/no)
Significance of research problem clear?	(yes/no)
Research questions explicit?	(yes/no)
Research questions	Summary or quote from article
Research questions clearly connected to phenomenon?	(yes/no)
Assumptions identified?	(yes/no)
Assumptions	Description
Theoretical framework identified?	(yes/no)
Theoretical framework	List (record references)
Clarification of influence of theoretical framework?	(yes/no)
References include other faculty development articles/sources?	(yes/no)
Researcher's discipline identified	(yes/no)
Researcher's discipline	Describe
Other significant info re researcher, including relationship to program participants	Describe
Participants – how identified?	Describe
Participant inclusion criteria	Describe
Discussion of attrition	Describe
Data gathering process described	(yes/no)
Timeframe indicated	(yes/no); describe if included
Data analysis method described?	(yes/no); describe if included
DA report of participants' response?	(yes/no)
DA framework clear?	(yes/no)
DA supported by quotes/findings?	(yes/no); describe if included

DA evidence provided as to how representative findings were?	(yes/no)
Level of evaluation	2 Lists – Levels 1 to 5 (Levinson-Rose and Menges); Levels 1-4 BEME <sup>19</sup>
Conclusions -- limitations identified?	(yes/no)
Points of note	Describe if any
* Article summary	One-two sentence summary
* How was theory used?	Describe
* Recommendations directed...	Describe if included
* categories added after initial review	

In Appendix B, and throughout this dissertation, studies are identified by reference number. This reference number is the unique identifier assigned by RefWorks. Numbers are not sequential, since studies later excluded were included originally in the RefWorks database.

In this meta-study, each research article analyzed was treated as an individual case and the analytical procedures of the meta-study applied to it. In cases where initiatives were discussed in multiple published articles, the collection of articles was treated as a single case. Thus the study includes 73 initiatives, reported in 77 published articles. The discussion of analytical procedures follows in Steps 3, 4 and 5.

All articles available online through the SFU library system were retrieved online and downloaded. In cases where articles were not held electronically at SFU, they were ordered through interlibrary loan.

#### **2.5.4. Step 3: Conducting a meta-data analysis**

The first step in completing the meta-study was writing a description of the 73 studies included. This was essentially demographic information, and was intended to provide background on the location of studies, the types of initiatives included, and the researchers. This summary is included in the findings chapter in Section 3.1. The studies are listed alphabetically in Appendix A. For each included study, Appendix B provides a

<sup>19</sup> Since the five levels of evaluation used by Levinson-Rose and Menges (1981) in their review will be useful for comparison, I considered each study's evaluation scheme in this light. I will also make note of the level of evaluation according to the BEME refinement of Kirkpatrick's levels, done by Steinert et al (2006) since this provides somewhat different information.

brief summary of the study and notes level of evaluation; Appendix B is ordered by reference number.

Paterson et al. define meta-data-analysis as "... the comparative analysis of research findings of primary research studies conducted by a variety of researchers" (p. 55). They note the purpose in nursing as having very clear application:

Meta-data-analysis contributes to the overall aim of meta-study – that is, to extend knowledge about a particular phenomenon in a field of study. This is most relevant when a multitude of perspectives about a particular phenomenon exist and appear to be disconnected and at times dichotomous. The body of knowledge that emanates from such competing perspectives is often inexplicable to the practicing clinician who must attempt to decipher what is relevant to apply to the care of clients. (Paterson et al., 2001, p. 56)

Just as in the case of nursing practice and research, instructional development and the study of effective teaching in higher education has both an applied and a research aspect. The focus in this meta-study is on research, but specifically research into practice, rather than research with a more conceptual focus. Thus, this meta-data-analysis focuses on findings in the primary studies addressing the promotion of more effective teaching on the part of those who participated in the initiatives. This question led to consideration of the types of findings that were reported, whether these were findings of individual change, change in students, change in departments or broader changes in institutions or beyond.

However, a secondary purpose of this meta-study is to extend the knowledge of the field of instructional development and to do this, more was required. Meta-data-analysis provided a way to look at the type of findings reported in the studies, highlighting some weaknesses in the field, and in particular the weak connection between the study of instructional development initiatives and the broader situation of faculty members learning to teach in higher education. The weakness of this connection is discussed in Chapter 4.

#### **2.5.5. Step 4: Conducting a meta-method analysis**

The purpose of a meta-method analysis is to "consider how the methodology that has been applied to the study of a phenomenon has shaped current understanding

about it” (Paterson et al., 2001, p 72). It was an initial goal of this study to compare studies conducted using the same methods, and compare studies of similar instructional development programs conducted using different methods to determine at least some of the implications of methodological choice in the study of instructional development – something that has not yet been discussed in the instructional development literature. However, the majority of studies included in the meta-study used a form of evaluation research: there was not sufficient variety of approaches to allow for an extensive comparison of the impact of a wide variety of methodological approaches. The impact of the methodologies used on research outcomes is discussed in the meta-method analysis section of Chapter 3, and in Chapter 4.

### **2.5.6. Step 5: Conducting a meta-theory analysis**

The intent of the meta-theory portion of the meta-study was to identify theories and models of learning used as a basis for instructional development initiatives. This process began quite simply by recording researchers’ explicit citation of literature that influenced the development of their faculty development initiative. It seemed inaccurate to simply describe this as references to theory. Certainly some educational theories were cited, but in other cases, the basis for initiative design was not a theory but rather an idea or approach drawn from the literature. Accordingly, I have referred to references to the literature, rather than “theory.” Once the preliminary study was completed, it was apparent that researchers used the literature in multiple ways. Since this in itself was of interest, an additional category for note-taking was added to the data collection form to document the uses of the literature for each study. Since the literature was used in multiple ways within individual studies, it was coded in multiple categories. To ensure accuracy in this coding process, it was done twice with an interval of two weeks in between, then checked for consistency. Since part of the goal of this meta-study was to identify patterns within the field of instructional development, the references cited by each included study were examined and the most common citations identified.

### **2.5.7. Step 6: Conducting a meta-synthesis of the findings of the analyses**

The meta-synthesis stage is the point at which the meta-data-analysis, meta-theory and meta-method investigations are considered together. When a meta-synthesis is fully realized, several purposes may be achieved (as per Paterson et al., 2001):

- To critically interpret strengths and limitations of various contributions to the field
- To uncover assumptions underlying specific theories [and the way in which they are enacted in instructional development]
- To search for alternative explanations for paradoxes/contradictions
- To determine which theoretical stances are and are not compatible and why
- To propose alternate theory structures within which existing knowledge can be interpreted

Completion of this section of the meta-study involved side-by-side readings of the findings from the meta-theory, meta-data-analysis and meta-method sections. The process of meta-synthesis involved reading across sections, and considering questions such as the impact the type of methodology selected might have on the type of findings that are possible, and the implications of the level of evaluation completed for further application of the study. The literature of instructional development practice is not a highly theoretical and well-developed one. The meta-synthesis achieved in this study reflects this, and is primarily an identification of themes and assumptions that run through the literature. These themes and assumptions are identified in Chapter 3, and discussed further in Chapter 4, the discussion chapter.

#### **2.5.8. Step 7: Disseminating findings**

The final step of meta-study methodology is the dissemination of findings. That part of the process is ongoing.

### 3. FINDINGS: EXPLORING THE LITERATURE OF INSTRUCTIONAL DEVELOPMENT

This chapter reports findings of a meta-study of 73 instructional development initiatives. The chapter is divided into five sections. The first section is an overview of the studies included. It identifies study sources, and describes the initiatives themselves. The second section, the meta-theory analysis, analyses the uses of literature in the 73 papers included in the meta-study. The third section, the meta-data-analysis, reports patterns within study findings. The fourth section, the meta-methodology analysis, examines the methodologies used to study the initiatives. Finally, the fifth section, a meta-synthesis based on the preceding three sections, identifies themes within the literature which are then discussed further in Chapter 4.

#### 3.1. Overview of studies included

Seventy-three studies published in peer-reviewed journals between 2000 and 2009 are included in this meta-study. The studies are drawn from 34 journals; the single largest source of studies (13, or almost 18%) was *International Journal for Academic Development*. (See Table 3.1 for a complete list of journals, and number of studies drawn from each.)

**Table 3.1 Sources of studies**

<i>International J. for Academic Development</i>	13	<i>J. of Asynchronous Learning Networks</i>	1
<i>Medical Teacher</i>	9	<i>J. of College Science Teaching</i>	1
<i>Medical Education</i>	5	<i>J. of Computer Assisted Learning</i>	1
<i>Teaching and Learning in Medicine</i>	5	<i>J. of General Internal Medicine</i>	1
<i>Innovative Higher Education</i>	6	<i>J. of Dental Education</i>	1
<i>Teaching in Higher Education</i>	4	<i>J. of Environmental Education</i>	1
<i>Higher Education</i>	3	<i>J. of Faculty Development</i>	1
<i>Canadian J. of Higher Education</i>	2	<i>J. of Further and Higher Education</i>	1
<i>Academic Medicine</i>	1	<i>J. of Higher Education</i>	1
<i>Active Learning in Higher Education</i>	1	<i>J. of Professional Issues in Engineering Education and Practice</i>	1
<i>Alcoholism</i>	1	<i>J. of Professional Nursing</i>	1
<i>Computer Assisted Language Learning</i>	1		

<i>Equity &amp; Excellence in Education</i>	1	<i>New Directions for Teaching and Learning</i>	1
<i>Higher Education Research and Development</i>	1	<i>Research in Learning Technology</i>	1
<i>Instructional Service</i>	1	<i>Teaching and Learning</i>	1
<i>International J. of Science Education</i>	1	<i>Teaching and Teacher Education</i>	1
<i>International J. of Training and Development</i>	1	<i>The J. of General Education</i>	1
		<i>To Improve the Academy: Resources for Faculty, Instructional and Organizational Development</i>	1

The studies were conducted at a wide range of universities in North America, Europe, Australia and Asia; only McGill Medical School (five studies) and Emory University (two studies) were the site of more than one study included. All the studies were published in English. Table 3.2 describes the location of studies. In total, 26 of the studies were specific to the health sciences (mainly located in faculties of medicine, but also faculties of nursing and dentistry). The remaining 47 studies focused on faculty in various academic units across the institution.

**Table 3.2 Location of studies, where indicated in the study**

Country/Region	Number of studies
United States	28
Europe	12
United Kingdom	10
Australia	5
Canada	9
Asia (HK, Singapore, Philippines)	4
Israel	2
South Africa	1
New Zealand	1

### 3.1.1. Study participants and researchers

Inclusion criteria specified that all those who took part in the instructional development initiatives were university faculty. These faculty members came from a wide variety of departments and schools, including education, sciences, medicine, humanities, engineering and social sciences. The largest single category of participants was medical school faculty; 20 of the studies were set in medical schools.

In 33 of the studies, at least one of the researchers included academic, professional or educational development as an employment responsibility – that is, the

researchers were employed by their university to design, deliver and/or research academic development initiatives. The relationship between researchers and faculty participants in the studies was rarely described as part of the initiative report. Some journals (for example, the *International Journal for Academic Development*) provide an author biography that allows the reader to determine the relationship; much more rarely the connection is mentioned in the article itself. In some cases faculty who participated in the initiative wrote the paper (6); in others, authors were facilitators, program planners or in other ways responsible for the initiative they were writing about (17). In 41 of the 73 cases, the relationship was not mentioned and could not be determined.

### 3.1.2. Instructional development initiatives reported

The term “initiative” is used as the generic descriptor of all instructional development efforts in this dissertation. This term is intended to be broader than “activity,” and to encompass both instructional development cases where multiple activities take place as part of the same planned process and stand-alone activities. Initiatives may be planned by individuals for their own professional development, by colleagues for colleagues, or by academic development professionals for other faculty.

Several types of initiatives were reported, involving varying numbers of faculty ranging from single individuals completing reflective activities to large groups. Types of initiatives are defined and reported in Table 3.3. The most common type of initiative, with 26 reported, was the workshop. Courses (12) and consultations with a peer or professional in faculty development (10) were the next most common initiatives. The purpose of five initiatives was curriculum revision with instructional development comprising one intended outcome.

**Table 3.3 Types of instructional development initiatives**

Definition	Examples
Workshop/workshops: a stand-alone event with a specific focus	26
Consultation with instructional development specialist	7
Consultation with a peer	3
Face-to-face course, with specific enrolment and a series of course meetings	7
Online course	6

Discussion group	7
Curriculum revision/implementation project with instructional development as one intended project outcome	6
Scholarship of teaching project where participants worked on individual projects	2
Individual/personal reflection	1
Reflective journaling with feedback	1
Program to fund multiple initiatives proposed by faculty/administrators	1
Programs leading to a credential: One year <sup>20</sup>	6
Programs leading to a credential: Two year	1
Programs leading to a credential: Three year	1

Initiatives varied both in actual hours spent with others in the workshop, course or other activity (contact hours), and in the duration of the activity over time. For example, one initiative focused on introducing place-based education into the curriculum at Emory University (#21)<sup>21</sup>; it included a two-day workshop at the beginning of the summer term, a field trip at the beginning of the autumn term, independent work on developing and teaching a course incorporating place-based ideas and a celebratory dinner at the end of the year. The duration of the initiative was thus a full year, although actual contact hours were fewer than thirty. Table 3.4 reports duration (in days, weeks or years) and contact hours by type of initiative.

<sup>20</sup> Programs leading to a credential typically involved a series of related courses and projects completed by the participants.

<sup>21</sup> Studies are identified by Refworks number in Appendix B.

**Table 3.4 Contact hours and duration of instructional development initiative**

	Not reported	1 day or less	2-3 days	1 wk	2 weeks -2 months	Four months (1 term)	8 months (2 terms)	Two academic years	Three academic years
<b>Not reported</b>	Consult (30) Course (350) Course (376) Course (59)				Course (349) Course (346)	Consult (58) Consult (332) Course (89) Course (90) Course (343) Discuss (395)	Course (368) Curr (24) Curr (389) Curr (397) Discuss (55) Cred (361) Cred (393) Cred (69) Work (86) SOT (925)	Cred (355)	Curr (25) Curr (373) Cred (74)
<b>Written only</b>	Consult (73)								
<b>1-8 hours</b>	Consult (338)	Consult (337) Work (57) Work (3) Work (7) Work (43) Work (65) Work (327)			Work (66)	Consult (326)	Work (333)		
<b>10-12 hours</b>	Work (83)		Work (353) Work (331)		Work (93)	Consult (364) Consult (34) Discuss (50) Course (354)		Course (925)	
<b>18-24 hours</b>			Work (348)	Work (329)		Discuss (359) Work (20)	Discuss (51) Discuss (402)		
<b>30-40 hours</b>				Work (75) Work (29) Work (339)			Work (21) Work (345) Work (54)		
<b>60+ hours</b>	Work (375)						Curr (18) Cred (48)	Discuss (8) Work (31)	
<b>100+ hours</b>						Work (347)	Cred (316) Cred (71) Work (94)		

Abbreviations used in this table (See Table 4.3 for definitions)

Work – Workshop; Course – online or face-to-face course; Consult – consultation with peer or faculty development professional; Discuss – discussion group; Curr – curriculum revision project; Cred – credentialed program; SOT – Scholarship of Teaching. Bracketed numbers indicate RefWorks initiative number: see Appendix B.

It is worth noting that workshops, often characterized as brief interventions, sometimes include components that can take place over a longer period. In many cases contact hours are not discussed. This is true for almost all the programs leading to credentials, for example, which might be expected to have the greatest number of

contact hours. Curriculum revisions with instructional development as an intended outcome are another category where contact hours are not typically reported, and where they are impossible to estimate.

The labels used for the types of sessions are from the authors themselves. This leads to some unusual cases where, for example, a workshop might have more contact hours over a longer period than a course. (For example #94 Knight et al., described by the authors as a workshop, met weekly for more than 100 hours over two terms.) Considering duration and total hours, rather than just the format of the initiative (e.g., workshop, course), provides a more accurate view of the intensity of a particular initiative.

### **3.2. Meta-theory analysis: Uses of literature in instructional development initiatives**

This is a meta-study of a literature of practice, not of a highly theoretical or conceptual literature. Educational theories do inform, in many cases, both the practice of instructional development and research into that practice, but the literature is not consistently based on theoretical writings. Researchers in the field refer to a variety of educational literature, including some that is theoretical (such as Schön's (1983) theory of reflection) and some that is simply seen as valuable in application (such as various explanations of Problem-Based Learning (PBL) and other teaching approaches). This literature informs the field in various ways, most frequently as a rationale for the development, delivery or evaluation of instructional development initiatives.

In this, the instructional development literature differs from some other research literatures, and poses a challenge for meta-theory analysis. As Patterson et al. note, following Neufeld (1994), "Meta-theory is a critical exploration of the theoretical frameworks or lenses that have provided direction to research and to researchers, as well as the theory that has arisen from research in a particular field of study" (Patterson et al., 2001, p. 91). Within the qualitative health literature where meta-study methodology was developed, authors identify four linkages between theory and research: theory-testing research; theory-generating research; theory-evaluating research; and theory-framed research. Within the instructional development literature direction comes not only from theory, but from less theoretically developed ideas within the literature of education:

essentially, suggested approaches to practice. Although there are some examples of theory-framed research, these are generally in the minority. I did not find examples of theory-testing, theory-generating or theory-evaluating research among the studies included in this meta-study.

It is true, though, that the educational literature informs the practice of instructional development. When I began my exploration of the influence of other educational writings on instructional development initiatives, I began with a consideration of the idea of theory. I used the term “theory” to mean simply an explanation of how something happens, and identified two characteristics that were central to it:

- It is descriptive: it describes a process whereby learning takes place, but does not necessarily explain why the learning occurs.
- It is predictive: there is an assumption that if the process is followed, learning will occur.

Since so little of the research is based in theory, I decided on reflection that, although this definition is useful, it is not really necessary for the purposes of this study. What matters for this exploration of the instructional development literature is where ideas come from, be that theories or other instructional development initiatives or elsewhere. Therefore, I decided to focus not on theory per se, but rather on the ways in which citations from the educational literature were used to support the design and implementation of instructional development initiatives.

Not all the literature cited is a theory or model of teaching and learning; some citations are more specifically focused on a particular aspect of teaching, for example evaluation or curriculum design. For example one study (#360) used Parker Palmer’s (2002) idea of open-door assessment as a basis for an initiative, and evaluated its impact for improving teaching among a small group of colleagues; another (# 59) drew on Goldenberg’s (1991) ideas of instructional conversations to design an online course for language teaching and model the approach. As these examples suggest, the literature cited is used in several applied ways: as a basis for justifying or planning programs; as a tool for program evaluation; within programs as content; as inspiration for the modelling of desired behaviours; and/or to inform the teaching approach or research methodology used in the initiative. Table 3.5 summarises the various uses of the

literature in the 73 studies included in this meta-study and defines each use. Since initiatives may use ideas from the educational literature in more than one way, the number of notations exceeds the actual number of studies (73) in the meta-study. The various ways the literature is used in the studies, as reflected in Table 3.5, is discussed in the following sections.

**Table 3.5 Uses of educational literature in the studies**

How was literature used?	Number of cases	Definition
No rationale identified from the literature	22 cases ID Numbers: 3, 30, 31, 54, 65, 74, 83, 86, 89, 93, 326, 327, 331, 337, 338, 363, 346, 375, 387, 376, 350, 402	No literature is cited to explain the rationale for the project. In some instances goals for the program are stated, or educational principles are identified, but in insufficient detail to positively identify influences.
Ideas from the literature as content	15 cases ID Numbers: 7, 8, 20, 21, 24, 50, 57, 73, 75, 77, 316, 329, 348, 397, 927	The instructional development initiative involves teaching participants a particular educational idea, or teaching them to use the methodology that comprises part of an approach (for example, teaching participants the role of facilitator for PBL approaches).
As program rationale	4 cases ID Numbers; 48, 58, 332, 393	An idea from the literature is cited as being the inspiration for a particular initiative; it may or may not be made explicit to those participating.
As basis for initiative design	28 cases ID Numbers: 18, 21, 25, 29, 43, 48, 50, 51, 55, 59, 66, 71, 75, 90, 97, 329, 333, 339, 343, 345, 347, 349, 354, 359, 360, 361, 364, 378 397, 925	The design of the instructional development initiative is based on a particular educational idea (for example, a program based on Schön's (1983) theory of reflective practice will include structured time for participant reflection).
As basis for evaluation	14 cases ID Numbers: 8, 48, 67, 69, 75, 343, 354, 355, 364, 373, 389, 395, 927	An idea drawn from the literature was used as the basis for comparison between what was expected and what was achieved, or used to analyse the experience of participants in the course initiative.

### **3.2.1. No rationale identified from the literature**

In 22 of the 73 studies included in this meta-study, there was no reference to the literature in support of the initiative. In some instances, the research report simply described what was done and the outcomes without any mention of a rationale for the activities. In others, program goals or underlying principles were identified, but no literature was cited to explain their derivation. For example, #3 describes a series of short workshops focused on assessment, evaluation and teaching approach; the references include one reference that mentions theory<sup>22</sup> but the article doesn't describe it or clarify its influence. In another example, #54 identifies seven principles underlying program design: learner-centred teaching strategies; skills-based small-group practice sessions utilizing role-play; repetition and reinforcement of major ideas, themes, and skills; integration and linking of ideas throughout the course; focused, practical take-home project assignments; testing and follow-up interviews; and opportunity to work with mentors. No references for these principles are cited; the principles may have been developed based on the authors' experience, but this is not made explicit.

It would perhaps be possible to identify some of the program goals or principles mentioned by study authors as reflecting the influence of particular writers; however, where there is no specific citation this seems speculative. It also seems unwise to suggest a level of sophistication that may not have been present in the program design. In cases where a rationale is absent, it is also important to consider the influence of journal policy and particularly article length as factors in this exclusion. Although it may be a commentary on the field that authors and editors are comfortable with articles that do not include a rationale for an initiative, it is important not to read too much into this.

### **3.2.2. Literature as content**

In 15 instances, content from literature was specifically taught to faculty members participating in the initiative. Most commonly, what was taught was a particular approach to teaching. Both Problem-Based Learning (PBL) in three cases (#7, 20, 348) and student-centred teaching in four cases (#21, 73, 316, 329) are examples of this. Adult learning theory was part of the content in two initiatives (#57, 329). Single instances of ideas such as Universal Design for Learning (#8), authentic assessment (#397),

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<sup>22</sup> Hewson, M.G. (2000). A theory-based faculty development program for clinician-educators, *Academic Medicine*, 75, pp. 498–501

communities of practice (#325) and a particular approach to direct instruction (the Rosenshine approach – #24) were also reported.

Reports on initiatives differ in the extent to which they discuss the teaching of content from the literature. For instance, in article #77, an initiative aimed at preparing instructors for online teaching, the authors state they taught pedagogy for online teaching as part of the process; however they do not describe how they taught the pedagogical approach. In others, this is more explicitly described. For example, in #20 the authors describe the importance of teaching the content explicitly:

The [organizers] concluded that faculty needed to first understand how student learning takes place in the context of the learner-centered, small-group, inquiry-based pedagogy. As understanding of these processes was central to building a core understanding for faculty, the PBL process became the first core skill covered in the first workshop in the curriculum. The second area of curriculum development focused on the facilitator/tutor role played by faculty in a PBL curriculum. (Dalrymple, K.R., Wuenschell, C. & Shuler, C.F. 2006, p. 949)

In another example (#73), participants read descriptions of student-centred teaching and patient-centred care at the beginning of the initiative. Their teaching was then observed, and they were given written feedback focused on observed incidents of student-centred teaching and patient-centred care. In both of these examples, the delivery of this content was central to the initiative.

### **3.2.3. Literature as program rationale**

In four instances, ideas drawn from the literature were used to justify the development of a program, but were not themselves central to program design or delivery. For example, initiative #58 was designed to increase retention of engineering students by providing more varied methods of instruction to engage more students in learning. Faculty developers responsible for this program laid the groundwork for the initiative by presenting faculty with information about students' varied learning styles, thus arguing that varied styles of instruction were necessary to accommodate different learning styles. However, there is no evidence that the concept of learning styles was integrated into the initiative, which focused on introducing faculty to various techniques designed to promote interaction in the classroom and lessen reliance on lecture.

In another example, initiative #48 cited literature that supported a correlation between teachers' conceptions of teaching and the depth of student learning. The authors used an adaptation of Prosser and Trigwell's<sup>23</sup> (1999) framework to evaluate participant change as a result of the program. By contrast, initiative #332 did not rely on the literature cited as a program rationale beyond the initial planning stages. The authors cite Becher and Trowler (1989; Becher, 1994) and others who argue that discipline is the primary place of identification for faculty; the citations helped to justify the development of a peer-based faculty development program conducted within university departments but there is no evidence of its influence beyond that. Initiative #393 also referred to the significance of disciplinary differences and the power of Wenger's (1998) idea of communities of practice in justifying a mentorship program for new faculty situated within departments as a complement to a campus-wide initial faculty development program, but beyond the simple fact of grouping faculty members by departmental affiliation no further use is made of Wenger's ideas.

#### **3.2.4. Ideas from the literature as basis for initiative design**

In 31 cases, an idea drawn from the literature explicitly formed at least part of the basis for the design of the instructional development initiative. This use ranged from very specific to more general. When the literature referenced was used very specifically, it was sometimes taught as content as well. For instance, #59, an online faculty development course for foreign language teachers, modelled and taught participants the use of instructional conversations (Goldenberg, 1991) for language teaching online. The course material was designed so the faculty themselves would experience this type of online conversation, and thus the sessions were designed directly using the teaching approach that informed the design. In contrast, while the design of the initiative described in #66 incorporated the process of reflection as proposed by both Schön (1983) and Brookfield (1995, 2000), there was no rigorous adherence to specific aspects of the reflective process. In this case, the intention was to ensure consistency in faculty ratings of students' performance in presenting a clinical case study by practicing with video-taped student performances; participants discussed the ratings each had given with the idea of arriving at a shared understanding of the ratings, and a consistent approach to assigning them in the future.

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<sup>23</sup> References cited within the studies are included in my reference list only if I have referred to them myself. References cited by more than one initiative are included in Appendix C.

Eleven of the 30 articles citing specific literature as a basis for the design of the initiative drew on the idea of reflective practice, as espoused variously by Schön (1983, 1987), Brookfield (1995, 2000) and Palmer (1998). Initiatives where reflection played an important role varied in length from hour-long workshops to multi-year, credentialed programs, but the majority were at least one academic term in length. For example, initiatives #361 and #355 both specified development of reflective practice as a goal of the initiative. This was made explicit to faculty participants, and activities were designed to require reflection. Initiative #361 was an eight-month program for faculty with a stated outcome of the development of the skill of reflective practice, and both activities and evaluation of participant success focused on the reflective process. Initiatives based on ideas of personal reflection tend to be focused on individual change as an outcome; in fact in all 11 studies, individual change was the focus, rather than departmental or institutional change.

In three of the 30 studies, the initiative was explicitly planned around a particular approach to teaching and learning. For example, initiative #353 employed the case-based method for both medical and nursing school faculty, a method developed in the Harvard business school. The focus here was on the method, and evaluation explored participants' views of whether or not it would be effective in their setting. Initiative #43 used the theatre approach of Boal (1979) as a basis for discussion of classroom management. Here the approach itself was not central, in that participants were not expected to apply it later. Parker Palmer's (2002) open-door assessment formed the basis for the design of initiative #360, in which a group of colleagues used the approach to work together to improve their teaching. Their evaluation focused both on what they had learned and on the degree of fidelity to the approach they felt they had achieved.

Although researcher/faculty developers may state that a particular writer's work is important in the development or design of their program, the connection is not always made explicit for readers. For example, the authors of study #349, which describes a workshop designed to introduce faculty to the use of interactive computer technology in teaching, stated that a constructivist approach to learning was an important component of the development of the initiative, and cited several articles related to this (for example Jonassen, 1992) but it is not clear how this was used in the initiative design. Similarly, references explaining a program rationale are not always made explicit. For example,

the authors of #339 state that adult learning theory was used to plan the initiative, but no further detail or reference to the literature is provided.

In some instances, authors explicitly expressed the hope that participants would adapt the teaching approach used in the initiative as a basis for development and delivery in their own courses, and even beyond. This is nowhere clearer than in #71. In this medical school initiative, developers strove to create a learner-centred environment for faculty member participants, asking them to set their own goals for the program and involving them in a variety of group and personal reflective activities designed to help them achieve greater awareness of themselves as learners and teachers. They hoped that the development of these skills would ultimately influence the students who would study with the faculty members to be more patient-centred in their care approach. "We hypothesized that by integrating elements of skill mastery, personal awareness and relationship formation, faculty would feel more 'connected' within the medical school and would use the same relationship-centred processes with students, who in turn would adopt them in working with patients" (Pololi & Frankel, 2005, p. 155-156). At least according to the report of the initiative, they did not make this hope explicit. Another example, #21, did make the principles of sustainability and place-based education that inspired the program explicit, citing authors such as Orr (1992, 1994) and Thayer (2003). This Emory University project aimed to develop courses supporting the idea of place-based experiential education in support of sustainability. Facilitators/organizers modelled sustainable practices and incorporated field trips and other activities, leading participants to a personal knowledge of the Piedmont region.

### **3.2.5. Literature as basis for program evaluation**

In 15 cases, a citation from the literature informed the design of the evaluation approach used to determine program success. As a basis for evaluation, these ideas were used in two ways. In some cases, the initiative was examined to see how closely it had applied a particular approach. This is the case in initiative #360, for example. Here the participant/researchers used Parker Palmer's (2002) open door assessment to design their term-long peer assessment project. Their evaluation focused not only on how useful the assessment process was for their own growth as teachers, but more specifically on how successful they had been in applying the steps of the process as identified by Palmer. Thus Palmer's idea was central to the evaluation, as well as to the

initiative design. In other examples, an idea from the literature was used to build an evaluation instrument, or an existing evaluation instrument or approach was used to make sense of the outcomes of a faculty development initiative. For example, in #67 the participant/author (Peel, 2005) used Kolb's (1984) learning cycle to explain her experience of a year-long program. "Following Kolb's experiential learning cycle, my critical reflections were first stimulated by my classroom experiences, and then informed by pedagogical theory. This interplay opened new theoretical horizons, and provided the insights for further classroom experimentation" (p. 492). In another case (#373), one of the initiative's goals was institutional change. Researchers drew on the educational change literature (Fullan 1993, 1999) to inform their analysis of change within the university and thus determine initiative success. In another case (#925), researchers analysed the extent to which Lave and Wenger's (1991) notion of legitimate peripheral participation in a community of practice could be used to describe what happened when they organized a series of seminars as an instructional development initiative in a mathematics department.

In the remaining 12 cases, researchers evaluated programs in which they were not participants. Three of these initiatives (#48, #69 and 354) used various measures to determine if participants' conceptions of teaching had changed as a result of their participation in the program. In these cases it was assumed that some conceptions of teaching led to better learning outcomes for students than others. Others (#75, 355, 364), based on reflective practice, analysed participants' reflections on learning to determine if development in their understanding of teaching had occurred.

### **3.2.6. Types and frequencies of literature cited**

Individual studies exist within a web of other literature. As discussed above, academic developers and researchers refer to the literature to design and evaluate instructional development initiatives. They use approaches to teaching described in the literature as models of ideal behaviour, and teach aspects of the literature as content in initiatives. In addition, they cite other types of literature including reviews of the literature, conceptual articles, and reports of other faculty development initiatives. The extent to which researchers cite other articles identified with faculty development is one measure of the extent to which faculty development can be seen as a field. It is valuable,

therefore, to consider the most common citation types and their sources, and to investigate the extent to which researchers in this area refer to each other's work.

In total, the 73 articles cited 2,054 references. Sources for citations are outlined in Table 3.6

**Table 3.6 Sources of citations**

Type of reference	Number of studies
Articles in peer-reviewed journals	1103
Books/book chapters	636
Conference papers	84
Dissertations	13
ERIC documents	6
Government/professional association reports	95
Articles in the popular/semi-popular press	22

A total of 155 references were cited by two or more of the articles included in my database (see Appendix C). Table 3.7 lists the eleven most-cited references across the 73 papers in the database, each of which was cited by researchers in five or more initiatives.

The most frequently-cited reference, cited by 10 of the 20 health sciences initiatives included in this study (8 medical school; 1 nursing; 1 dentistry), was Wilkerson and Irby's 1998 article outlining a four-part framework for academic development. (No study outside of health sciences cited this article.) Wilkerson and Irby maintain that a comprehensive program depends on strong initial orientation to the faculty role (professional development), access to resources for teaching improvement (instructional development), leadership development, and organizational development. Curiously, although this seems like a strong basis for academic development programs, the framework itself was not drawn upon by those who cited the article. Instead, researchers cited the article to support contentions that faculty teach as they were taught (#20, #55, #57), that the need for faculty development was widely understood (#74, 97, 65), that faculty faced increasing pressure to enhance teaching skills (#339), that various types of faculty development were effective (#66), that field research on faculty development was important (#333) and that faculty development is important for the creation of organizational change (#83).

Two references were cited seven times each: Schön's (1983) discussion of reflective practice, and Ramsden's (1992) overview of learning to teach in higher education. Schön's analysis of professional education (1987), incorporating experience and reflection on that experience, was used as a basis for program design. Ramsden's (1992) three-stage model of development of teaching expertise, which suggests teachers progress from a focus on content/themselves to a focus on activities and finally to a focus on student learning, was used as a basis for evaluation of outcomes. None of the health sciences articles referenced Ramsden (1992); both health sciences and non-health-sciences researchers, by contrast, referred to Schön (1983, 1987).

**Table 3.7 References cited in multiple studies**

Times cited	Reference	Cited by (ID #)
13	Wilkerson, L. and D.M. Irby (1998). Strategies for improving teaching practices: A comprehensive approach to faculty development. <i>Academic Medicine</i> 73 pp. 387–396.	3, 7, 20, 55, 57, 65, 66, 74, 83, 97, 329, 333, 339
7	Ramsden, P. (1992) <i>Learning to teach in higher education</i> (London, Routledge).	30, 51, 75, 354, 355, 376, 397
7	Schön, DA. <i>The Reflective Practitioner</i> . New York: Basic Books, 1983.	8, 50, 51, 97, 332, 355, 359
6	Hewson et al., 2001 M.G. Hewson, H.L. Copeland and A.J. Fishleder, What's the use of faculty development? Program evaluation using retrospective self-assessments and independent performance ratings, <i>Teaching and Learning in Medicine</i> 13 (2001), pp. 153–160.	7, 20, 29, 55, 93, 97, 97.137
6	Ho, A. (2000). A conceptual change approach to staff development: A model for programme design. <i>International Journal for Academic Development</i> , 5, 30–41.	48, 69, 345, 368, 376, 354
6	Skeff KM, Stratos GA, Mygdal WK, Dewitt TG, Manfred LM, Quirk ME, Roberts KB, Greenberg LW. 1997. Clinical teaching improvement: Past and future for faculty development. <i>Family Medicine</i> 29:252–257.	31, 71, 74, 97, 329, 333
5	Biggs, J. (1999). <i>Teaching for quality learning at university</i> (Bury St Edmunds, Open University Press).	67, 331, 376, 368, 24
5	Boyer, E. (1990). <i>Scholarship reconsidered: Priorities of the professoriate</i> . Princeton, NJ: Carnegie Foundation for the Advancement of Learning	361, 363, 376, 373, 925
5	Lave, J. & Wenger, E. (1991). <i>Situated learning: Legitimate peripheral participation</i> . Cambridge: Cambridge University Press.	67, 359, 393, 925, 927
5	Palmer P, <i>The Courage to Teach</i> . San Francisco: Jossey-Bass: 1998.	8, 29, 97, 360, 368

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5	Schön DA. <i>Educating the reflective practitioner: Toward a new design for teaching and learning in the professions</i> . San Francisco: Jossey-Bass, 1987.	66, 73, 364, 368, 378
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### 3.2.7. Who references what?

Although it is most common for articles in health sciences to cite other health sciences literature, health sciences articles included in this study made a total of 108 citations to articles outside of the health sciences. The remaining 578 citations made in the health sciences studies were to other health sciences articles. Of the 1,379 citations made by the studies across academic contexts other than health-sciences, none were to literature from the health sciences. In other words, there was some citing of non-health sciences literature by authors in the health sciences, but no examples of authors outside of the health sciences citing those in the health sciences.

Of the health sciences articles referencing articles from other areas, 11 were references to methodological discussions. These included very specific articles on the validity of pre-post test reports and response shift bias, and more general references such as Crabtree and Miller's 1999 book *Doing Qualitative Research*. Fourteen were references to topics not specifically connected to educational techniques or approaches: professionalism, diversity, globalization and the like. Sixty-seven of the articles, books and book chapters cited focused on specific teaching techniques (teaching with cases, interactive lectures, role-playing) or general approaches to teaching (adult education, encouraging critical thinking). Those authors from a non-health-sciences context that were most commonly cited by authors in health sciences included Malcolm Knowles (1980, 1990, 1992, 1998: 5 references), Carl Rogers (1970, 1983: 5 references), Donald Schön (1983, 1987: 5 references), Stephen Brookfield (1995, 2000, 1993, 1987: 5 references) and Parker Palmer (1998: 2 references).

Of those papers describing initiatives in contexts other than the health sciences (53 of 73 in the total database), Schön (1983, 1987) was referenced in seven instances, and Palmer (1998) in three. The most commonly-referenced work, though, was Weimer and Lenze's 1991 review of the faculty development practice literature, which was not cited by any author in health sciences but by eight authors outside of health sciences. Ramsden's *Learning to teach in higher education* (1992) was cited in seven studies

outside health sciences, and none in health sciences. Four authors cited Rogers (1970, 1983), while five cited Brookfield's (1995) *Becoming a critically reflective teacher*.

Most studies – all but seven of the 73 in the meta-study – cite at least one article from the academic development literature. These included conceptual articles such as McAlpine, Amundsen, Clement and Light's (2009) discussion of the assumptions underlying the practice of faculty development and Brew and Boud's (1995) article exploring the connection between teaching and research. Specific research projects relevant to faculty development, for example Åkerlind's (2005) phenomenographic study of university professor's interpretations of the meanings of becoming a professor, were also cited. There were also several examples of papers in this meta-study referencing other papers in the meta-study. The most frequently referenced article from the meta-study was #354, Ho, Watkins and Kelly's 2001 report of an initiative designed to encourage faculty to adopt a more student-centred view of teaching, and evaluating both the changes in their conceptions and in the student ratings they received before and after. Two articles referenced #354 specifically; four more referenced another published report of the same initiative. The work was most often cited as an example of an initiative that paid attention to conceptions of teaching (#48, 69, 368), but Ho's model of the change process for conceptions of teaching was also cited (#345). Wildman, Hable, Preston and Magliaro's 2000 article on faculty study groups (#359) was cited twice, as was Pololi and Frankel's (2001) description of introducing adult education theories in an instructional development initiative for medical educators (#71).

### **3.3. Meta-data analysis: Variations, patterns and levels of reporting of findings**

Study findings varied widely in scope, from reports of change in university culture to reports of increased confidence felt by individual instructors. The variation is enough that it is not feasible to combine the findings and analyse them as a whole, as one would do in meta-analysis. Instead, this analysis focuses on patterns within the findings, and in particular pays attention to the level at which findings are reported, and the level at which evaluation was conducted.

### 3.3.1. Levels of evaluation: comparisons with earlier reviews

The nature and level of evaluation is a significant aspect of the practice literature. Consider for example a study examining changes in participants' attitudes, and one examining changes in students' average marks; clearly very different research approaches would be required. From one perspective, study methodology dictates the level of evaluation that is possible; from another, the desired level of evaluation limits methodological possibilities. (For example, a researcher who wishes to see whether a particular initiative has an impact on students' exam scores would not be able to use an ethnographic approach to the research.)

The three earlier systematic reviews also considered the level at which findings were reported. In all three cases, the influence of Kirkpatrick's (1979) approach to evaluation of training programs is apparent.

Levinson-Rose and Menges (1981) used a scale based on Kirkpatrick's (1979) four-step scale for evaluation of training programs. Their highest standard for evaluation of the success of a faculty development initiative was identified as measurable change in student learning. They identified five possible outcome levels:

- teacher attitude from self-report (Level 1)
- teacher knowledge from tests or observer (Level 2)
- teacher skill from observer (Level 3)
- student attitude from self-report (Level 4)
- student learning from tests or observer reports (Level 5)<sup>24</sup>

The suggestion of a hierarchy of learning outcomes was reinforced by Levin-Rose and Menges' decision not to include initiatives where the only evaluation was based on teacher attitude.

This scale seems reasonable for evaluating faculty development programs aimed at enhancing teaching, since surely enhanced teaching should lead to better student learning. At the same time, the five-level scale does have limitations, which will be addressed in the discussion in Chapter 4.

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<sup>24</sup> Note that I added the numbered scale for easier reference to the levels, and for cross-referencing to the Steinert et al scale.

The Steinert et al. (2006) review of instructional development initiatives in medical education uses a different scale than that used by Levinson-Rose and Menges (1981). This scale makes more distinctions, separating participants' views of, and satisfaction with, the program itself from their perception of what they have learned as a result of it. The scale Steinert et al. used is based on the standards of the Best Evidence Medical Education (BEME) Collaboration and is reproduced in Table 3.8. This scale is similar to that used by Levinson-Rose and Menges, in that it begins at the lowest level with perception of change by program participants. It has two significant differences, however. First, in Level 4A it provides for the possibility of institutional change. The earlier scale did not include this possibility. Second, except for the first level, Steinert et al.'s (2006) scale does not differentiate between findings reported by participants and those reported by observers. This means, for instance, that if a faculty member reports a major change in their understanding of a particular teaching approach based on a faculty development initiative, one can with this scale take the report at face value and record it as Level 2B knowledge change – not possible with the scale Levinson-Rose and Menges developed based on Kirkpatrick's (1979) levels of outcomes, where self-report is only identified as part of the Level 1 rating of participant attitude.

**Table 3.8 Steinert et al. levels of evaluation**

Level 1	<b>REACTION</b>	Participants' views on the learning experience, its organization, presentation, content, teaching methods, and quality of instruction
Level 2A	<b>LEARNING</b> —Change in attitudes	Changes in the attitudes or perceptions among participant groups towards teaching and learning
Level 2B	<b>LEARNING</b> —Modification of knowledge or skills	For <i>knowledge</i> , this relates to the acquisition of concepts, procedures and principles; for <i>skills</i> , this relates to the acquisition of thinking/problem-solving, psychomotor and social skills
Level 3	<b>BEHAVIOR</b> —Change in behaviors	Documents the transfer of learning to the workplace or willingness of learners to apply new knowledge & skills
Level 4A	<b>RESULTS</b> —Change in the system/ organizational practice	Refers to wider changes in the organization, attributable to the educational program
Level 4B	<b>RESULTS</b> —Change among the participants' students, residents or colleagues	Refers to improvement in student or resident learning/performance as a direct result of the educational intervention

*(Steinert et al., 2006, p. 501)*

The fourth and most recent review of the literature, Stes et al. (2010), uses another variation on the basic Kirkpatrick (1979) scale. Like Steinert et al. (2006), their scale begins with learning on the part of participants. For them, this may include learning of concepts or of skills, and also changes in attitude. Their next level, changes in behaviour, is consistent with Levinson-Rose and Menges' scale. Their final level, changes beyond the individual instructor, is divided into two foci: changes in student performance, and changes in the institutional context (in which they include changes in colleagues' understanding.) Table 3.9 contrasts the three scales with Kirkpatrick's original scale.

**Table 3.9 Comparison of evaluation scales**

Kirkpatrick	Levinson-Rose & Menges	Steinert et al.	Stes et al.
Level 1: Reaction of student/ training		Level 1: Reaction	

participant (can be immediate or later)			
Level 2: Learning (test-based in Kirkpatrick & Kirkpatrick 2007)	Level 1: Teacher attitude from self-report Level 2: teacher knowledge from test or observer	2A: Change in attitude 2B: Learning of concepts	Learning – changes in attitude, conceptions, knowledge, skills
Level 3: Behavior (may be reported by self or others)	Level 3: Teacher skill from observer	3: Change in behaviour	Behavior – transfer of learning to workplace
Level 4: Results (may include intangibles like “clearer strategic focus;” largely based on measurable/tangible outcomes)	Level 4: Student attitude from self-report	4A: Change in organization/system	Institutional impact, including impact on colleagues  and/or
	Level 4: Student learning from test or observer report	4B: Change in performance of student/resident	Change in students’ perceptions, study approaches, learning outcomes

The comparison of the approaches as reflected in Table 3.9 is a useful way to think about the 73 studies that comprise this meta-study. Table 3.10 summarizes levels of evaluation of the 73 studies using both Steinert et al. (2006) and Levinson-Rose and Menges’ (1981) scales. The Stes et al. (2010) scale is similar enough to that of Steinert et al. (2006) that it was not considered separately.

**Table 3.10 Levels of evaluation in studies included in this meta-study**

Levinson-Rose & Menges	
Cannot be classified with this scale	25
Level 1: Change in teacher attitude	33
Level 2: Change in teacher knowledge	3
Level 3: Change in teacher skill	11
Level 4: Change in student attitude	0

Level 5: Change in student learning	1
Steinert et al.	
Cannot be classified with this scale	10
Level 1: Reaction	9
Level 2A: Change in attitudes	10
Level 2B: Modification of knowledge or skills	9
Level 2 A and 2B	4
Level 3: Change in behaviours	23
Level 3 and 4A	1
Level 3 and 4B	1
Level 4A: Change in system/ organizational practice	4
Level 4B: Change among students	2

Neither scale allows every initiative to be categorized. In the Levinson-Rose and Menges (1981) scale, the largest number of uncategorizable initiatives are those where evaluation involves participant self-report of changes in skills, knowledge and/or behaviour. This scale allows for self-report only in the case of changes in attitude. Neither scale provides a way of recording changes in student rating of instructor, so those studies where only student rating changes are reported cannot be categorized.

Of the 73 studies, 33 could only be identified as reporting a Level 1 evaluation with the Levinson-Rose and Menges (1981) scale, that is, a report of changed attitude on the part of the participant. In fairness, this does not provide an accurate reading of the rigour of many of these evaluations. Several were fairly extensive studies of participants' experience of instructional development initiatives. For instance, #86 was a thematic, focus-group-based study of the impact of a collaborative instructional development program for instructors involved in teaching collaborative courses in an interdisciplinary first-year program. The study findings focus on the benefits and challenges of collaboration for teaching practice and student learning, but the results are reported only at the level of participants' response to the process. Other initiatives (#48 and #361, for example) reported findings based on participants' completion of various scales of conceptions of teaching. These are essentially formal tests of participants' attitudes, and cannot be rating more highly than Level 1 in the Levinson-Rose and

Menges (1981) scale, yet such scales represent a more robust measurement than this would suggest.

Few of the studies included in this meta-study evaluated initiative outcomes at a level much beyond the impact on the individual instructor. This was the case even in those studies where the timeframe of evaluation was extended and it might have been reasonable to expect to be able to see changes in student performance. For example, #97 involved a two-years-on follow-up with participants in a nine-month-long program, comparing their assessment of their own skills to those of a control group. There was no attempt to go beyond self-assessment with this evaluation, however.

Evaluation levels for each individual study are reported in Appendix B. The impact of these scales, and in particular the way in which the various forms of evaluation of change resulting from instructional development initiatives have shaped and influenced the field of academic development, will be discussed further in Chapter 4. In the next section, study findings as reported in the 73 studies will be examined in more detail and the specific types of change reported at each evaluation level analysed.

### **3.3.2. How findings are reported**

There were five levels at which study findings were reported:

- Findings focused on individual change resulting from participation in the initiative;
- Findings focused on the quality of the initiative itself;
- Findings focused on changes in student learning;
- Findings focused on departmental or in-program change resulting from participation in the initiative; and
- Findings focused on broader institutional change resulting from participation in the initiative.

Although the levels themselves are relatively distinct, there is overlap in the sense that some studies reported findings at more than one level. With only two exceptions, studies reported positive outcomes for the faculty development initiatives they studied. Table 3.11 reports the overall number of initiatives reporting findings at

each level, and identifies the specific initiatives reporting findings at each level from the 73 studies in the meta-study.

**Table 3.11 Study findings from all evaluation sources**

	Type of change	How many initiatives	Which initiatives reported this type of change? (Initiative #)
Individual change	Improved teaching skills	29	3, 7, 29, 31, 51, 57, 71, 77, 93, 97, 331, 327, 339, 347, 348, 353, 378, 387, 397, 402, 7, 24, 65, 66, (69) <sup>25</sup> , 73, 326, 327, 338
	Increased knowledge of aspects of teaching/pedagogy/ educational theory	12	55, 57, 59, 75, 83, 93, 345, 346, 360, 89, 339, 927
	Increased knowledge of Information Technology (IT)	4	31, 77, 343, 350
	More positive feelings about teaching	11	31, 55, 71, 77, 97, 329, 331, 349, 378, 402, 73
	Increased critical reflection on teaching	9	25, 30, 43, 347, 355, 364, 368, 378, 393
	Changed conception of teaching	7	75, 316, 355, 48, (345), 354, 361
	Enhanced personal development	6	18, 21, 71, 97, 329, 337
	Attended more conferences/did research	5	50, 54, 77, 373, 375
	Experienced new opportunities	1	97
	Increased networking	1	77

<sup>25</sup> Brackets indicate “no change” reported specifically as an outcome.

	Type of change	How many initiatives	Which initiatives reported this type of change? (Initiative #)
Student performance	Increased student grades	1	58
	Increased student learning	1	77
	Increased student retention	1	58
	Increased student satisfaction	2	373, 397
Departmental/In program change	Different/new courses/course components	4	54, 363, 375, 402
	Different teaching approaches within course	12	18, 21, 50, 51, 353, 363, 373, 376, 378, 389, 925, 927
	Improvements to existing curriculum <sup>26</sup>	5	8, 75, 51, 343, 376
	Enhanced collegiality	9	31, 55, 71, 316, 329, 359, 360, 378, 393
	Increased collaboration within or across departments	4	21, 25, 347, 363
	Changes in departmental practices	2	7, 74

<sup>26</sup> “Improvements” are noted when that is the way the study reported the changes. Changes to course offerings not specifically noted as improvements are reported as changes, above.

Institutional change	Changes to course offerings/programs	2	21, 373
	Changes in philosophy/mission	1	21
	Improved cross-disciplinary collegiality/ interdisciplinary collaboration	1	50
	Increased participation in service to the university	1	77
	More faculty development courses offered	1	74
	Other new initiatives	1	74
Focused on initiative	Should be mandatory	2	3, 349
	Was useful	5	(69), 332, 333, 346, 368
	Peer facilitation effective	1	18
	Addressed issues of importance to me	1	345
	Was too general	1	69
	Was well organized/planned	2	339, 343
	Used appropriate methods	9	3, 30, 43, 327, 329, 339, 348, 359, 393
	Comments on attendance	2	20, 54
	Valued interdisciplinary/ multidisciplinary experience	4	50, 75, 77, 359
	Provided safe space for learning	1	329
	Theory/practice balance frustrating	1	350
Sense of ownership of initiative important to success	1	395	

The major categories (individual change, departmental/program change, institutional change), and the ways in which each type of change was assessed, are discussed in the following sections.

### 3.3.2.1. Individual change

Almost all of the studies reported individual change among those participating in the initiative as at least one outcome. In total, 60 studies reported some type of individual change. Changes reported included improved teaching skills, increased knowledge and altered conceptions of teaching; several studies reported more than one type of individual change. Within each type of change, most of the studies relied on participants' self-report of their increased knowledge or skill, or their changed conception of teaching. Some of the studies did rely on observations by others, including students and those involved in the faculty development initiatives.

Tables 3.12 and 3.13 report the two major ways in which individual change was assessed: Table 3.12 reports individual change assessed through self-report, while Table 3.13 reports individual change as reported by observers of change in the individual faculty member's teaching. In most categories, individual change was mostly documented by comments from initiative participants, either on evaluation forms, in focus groups or interviews.

**Table 3.12 Individual change – self-report**

	Type of change	How many initiatives	Which initiatives reported this type of change? (Initiative #)
Individual change	Improved teaching skills	20	3, 7, 29, 31, 51, 57, 71, 77, 93, 97, 331, 327, 339, 347, 348, 353, 378, 387, 397, 402
	Increased knowledge of aspects of teaching/pedagogy/ educational theory	9	55, 57, 59, 75, 83, 93, 345, 346, 360
	More positive feelings about teaching	10	31, 55, 71, 77, 97, 329, 331, 349, 378, 402
	Increased critical reflection on teaching	9	25, 30, 43, 347, 355, 364, 368, 378, 393
	Changed conception of teaching	3	75, 316, 355
	Enhanced personal development	6	18, 21, 71, 97, 329, 337

**Table 3.13 Individual change reported by observers**

Type of change	How many initiatives	Which initiatives reported this type of change? (Initiative #)	
Individual change	Improved teaching skills	9	7, 24, 65, 66, (69), 73, 326, 327, 338
	Increased knowledge of aspects of teaching/pedagogy/ educational theory	3	89, 339, 927
	More positive feelings about teaching	1	73
	Changed conception of teaching	4	48, (345), 354, 361

### 3.3.2.2. Changes in student performance

In total four of the 73 studies reported change in student behaviour attributed to the faculty development initiative. Two of these noted an increase in student satisfaction (measured by a university wide survey in #373, and by interviews in #397), one reported increased student learning based on marks, and one reported both increases in marks and increased student retention. The latter study, #58, was of a program aimed at increasing student retention in an engineering faculty. Its focus was on encouraging faculty members to use more interactive techniques in their classes, and included reminders of the importance of practices such as using students' names and greeting them outside of classes.

### 3.3.2.3. Departmental/In-program changes

There were 28 examples of initiatives where changes at the departmental or program level were reported as a result of the instructional development initiative. This includes 16 initiatives where changes, additions or improvements to curriculum were reported; in three cases these initiatives were departmental or institutional efforts specifically designed to achieve curriculum reform, with instructional development as an aspect of the initiative. In several other cases, content or an approach was taught in the initiative in the hope that faculty would modify their individual courses to include use of

the methodology or the content. In one instance, over 60% of participants reported teaching content on alcoholism and addiction following an initiative focused on increasing this content in a medical school (#54). Participants in an initiative aimed at increasing use of the case method of teaching in health sciences indicated plans to incorporate the method in their teaching; the report on the initiative was based on immediate follow-up, so no application had been demonstrated (#353). Participants in an action research project involving Universal Design for Learning documented changes in course activities and content through changes to course syllabi (#8). In nine cases, increased collegiality (reported by the initiative participants themselves) was identified as a finding having an impact at the departmental or program level; in all but one of these cases, this increase in collegiality was the only finding identified at this level.

#### **3.3.2.4. Institutional change**

Change at the institutional level was reported in five initiatives. This included one initiative (#21) where the ongoing influence of an instructional development program in place-based education was credited at least in part with the adoption of sustainability as part of the university's mission statement. Another initiative (#373) was part of a university-wide strategic initiative to reform undergraduate education, and thus was part of a series of sweeping changes. Two of the initiatives (#74, 77) involved an expectation that faculty participants would be themselves involved in the delivery of instructional development subsequent to their own participation, and researchers reported that this was the case. Finally, as a result of a learning circle (#50), participants in one initiative became more actively engaged in university-wide activities concerning teaching, including participation in instructional development activities, and ongoing informal collaboration with colleagues from other departments.

#### **3.3.2.5. Focus on the initiative itself**

In 25 cases, findings included recommendations and comments on the nature of the faculty development initiative itself. These included specific comments on the instructional methodology (favouring small-group discussions and peer facilitation, for example), comments on the appropriateness of the planning, and general notes on the usefulness of the initiative for its purpose.

### **3.4. Meta-methodology: Influence of methodologies used**

The purpose of a meta-method study is, as Paterson et al. (2001) state: “ ... to determine how the interpretation and implementation of qualitative research methods have influenced the research findings and the emergent theory in a particular field of knowledge” (p.71). In the literature of practice considered in this meta-study, the most frequent approach is evaluation research using a variety of methodologies. This focus on evaluation reflects the meta-study’s inclusion criteria; it was a requirement that included studies evaluate a faculty development initiative and report empirical findings, just as earlier reviews of the literature required that empirical findings be reported. The various ways in which evaluation is done, though, reflects researchers’ views of practice. The implicit and explicit assumptions that become obvious from a consideration of methodological approaches may form the beginning of an emergent theory of instructional development practice. The components of this theory will be discussed in this section. The research methodology chosen also has an impact on the type of research findings discovered and on their reporting, and that will be discussed first.

#### **3.4.1. Methods used**

Although a variety of different research methods were used in the 73 initiatives in this meta-study, in most cases the authors did not identify a formal research methodology (e.g. ethnography, case study) guiding their work. Many of the studies take a basic, practical view of evaluation. In other words, researchers attempt to determine participants’ knowledge, skills and/or attitudes prior to a faculty development initiative, the participants take part in the initiative, then researchers attempt to determine if their knowledge, skills and/or attitudes have changed and/or been applied in their teaching practice and/or benefitted student learning. The evidence provided may come from the participants themselves, from observers or be garnered through surveys, questionnaires, interviews or analysis of course materials.

Most commonly, as noted in the findings section, researchers relied on participants in instructional development initiatives to assess the effectiveness of the initiative; participant self-reports comprised a large proportion of the findings. Researchers used a variety of approaches to collect participants’ responses. Surveys were particularly common, and there are several examples of surveys used either both before and after an initiative (#3, 29, 326, 327, among others) or just after the initiative

(#347). Participants were interviewed in several cases (for example #354, 332, 333). Further document analysis was sometimes conducted, either of participant portfolios or work produced as part of the initiative (#393), of participant journals (#368), or of course outlines and related documents (#75), among other documents. In most cases the approach selected involved asking people what they thought about an experience and analyzing their responses in some way, rather than using a more elaborate method to assess learning achieved through the initiative or its impact on students. Seven of the 73 studies involved observation of the faculty member in their teaching role; four studies included comparisons of student ratings before and after the initiative.

In some papers, specific qualitative methodologies are identified. For example, Peel (#67) used an autobiographical/narrative approach; McLeod et al. (#57) used grounded theory. In general, though, there are so few examples of methods that go beyond basic evaluation that it is difficult to conclude anything about the impact of qualitative research methods on the patterns of findings that emerge in the study. In this meta-study, it seems more important to consider the impact on the field of the absence of more sophisticated research design, and of a focus that rarely goes beyond simply “what works” in specific initiatives. This discussion will continue in Chapter 4.

### **3.4.2. Research questions**

Instructional development practice does not occur in isolation. Practitioners interact with faculty members who are working to enhance their teaching skills within the broad context of teaching at a university. As Pickering (2006) and others note, participation in an instructional development initiative is just one aspect of the process of learning to teach or enhancing existing teaching skills. Given that, it seems reasonable that researchers in instructional development would look at the impact of instructional development initiatives in the broader context of the process of becoming a university teacher. A review of the research questions for the studies in this meta-study, however, frequently reveals a narrow focus that does not go beyond the specifics of particular initiatives. For example, researchers attempted to determine if specific programs met the goals they set out (#74), if a learning circle approach was useful for science faculty as a means to improve their teaching (#50), and if those who had attended a workshop on interactive lectures lectured more interactively than those who had not (#327). Some

research questions were framed more broadly, examining the approach used in the instructional development initiative, for instance:

We seek to examine whether the 'educational developers as observers' model actually provides evidence that teaching observations can be developmental and stimulate reflective practice amongst those relatively new to teaching in higher education. (#30: p. 421)

Others considered the impact of instructional development at an institutional level.

The primary research question of this study was what aspects of the project [to introduce PBL across the curriculum] did the Samford [University] change-makers (administrators and faculty) believe were important to helping them accomplish change. (#389: p 241)

In all these cases, though, the basic question could be paraphrased as, "What is effective in this initiative?" In other words, there is an expectation on the part of researchers that their evaluation can answer the question, "What works?".

Some researchers did look beyond the immediate effect of the intervention, anticipating potential impact on professionals taught by those participating in the faculty development initiative.

We hypothesized that by integrating elements of skill mastery, personal awareness and relationship formation, faculty would feel more 'connected' within the medical school and would use the same relationship-centred processes with students, who in turn would adopt them in working with patients. (#71: p. 155-156)

The question here is particularly broad, suggesting as it does a research study that would examine the teaching and patient-care culture of the institution where it was conducted. The study report, however, focuses only on the experience of those who participated and does not examine any broader impact of the initiative. Most studies did not suggest such a broad focus; rather, they were aimed at simply evaluating the effectiveness of the program they analysed and its impact on students, participants, departments and/or the university. In most cases, they did succeed in this; however, this focus contributes to an underlying sense that the instructional development literature is essentially narrowly focused and concentrated on technical outcomes.

### **3.4.3. Alignment of findings and recommendations**

Another way to think about the anticipated impact of an instructional development initiative is to consider the recommendations researchers make. Many of the 73 studies in this meta-study include recommendations, directed either at others involved in planning faculty development, at university administrators, or at potential participants in faculty development activities. A comparison of the recommendations with the findings documented in each study indicated that in most cases, findings and recommendations were fairly closely aligned; that is, that there was at least some empirical data to support the recommendation and to justify its audience. In a few cases the findings seemed too weak to support the recommendations. For example, three of the initiatives recommended continuing support for instructional development and provided as support for this recommendation findings of more confidence among participants (#3), increased knowledge of content taught in the course (#75) and a general sense that a course was useful (#90). Such findings seem to provide weak evidence of the value of an initiative.

Some recommendations seem to be based more on the researcher's own opinions than on evaluation of participant experiences. Initiative #353, for example, discusses the teaching of a case presentation method. The author recommends that longer sessions would be useful, but a need for more time was not reported in the findings. In at least one case, study findings and recommendations seem disconnected from each other. Study #69 followed the experiences of four novice lecturers in a UK university as they completed a one-year induction program in learning to teach. The participants found the program marginally useful at best, finding it too general to be of much value; recommendations were to modify program groups to ensure they were within-discipline rather than having a generic focus. Although this seems a reasonable idea, it would have been at least as reasonable based on the findings reported in the study to question the relevance of the program.

Thirteen of the articles in this study directed their recommendations to administrators. The recommendations were fairly general, mostly suggesting continuation or enhancement of the initiatives discussed, or their implementation elsewhere. Support for these recommendations included impressionistic changes including shifts in culture of teaching (#51), a sense of improved vitality among faculty participants (#7) and increasing sense of university citizenship (#77). More measurably,

studies reported increased student retention (#58), improved skills (#73), more congruent rating of students by multiple faculty members (#66) and increased offerings of instructional development workshops by faculty members newly-prepared to do so (#74).

One study (#376) made recommendations concerning staffing in departments intended to support teaching and learning.

The staffing of academic development units needs to incorporate those who have demonstrable expertise in teaching and research in teaching, those who have expertise in research and the integration of research outcomes for learning, and those who are able to deconstruct the relationships between effective teaching and research processes in order to reconstitute them appropriately in a different disciplinary context. This will not be easy: our own experience is that it combines self-development as an academic and the establishment of collegial links with researchers in other disciplines. Higher education is now an established research area, and as professionals in this area it is essential that we continue to push the boundaries of what is known to be effective for our contribution to the enhancement of the total learning environment. A focus on exploiting the synergies between research and teaching seems to be one effective way of doing this. (#376: p 115)

The initiative in this case was a program designed to assist faculty in bringing their research skills to bear on teaching and their curriculum. This reference to academic development as a location for bringing together the research and teaching roles of faculty is unique in the articles included in this study. The recommendation itself is justified by the description of the work undertaken by the academic developers in each of the three initiatives described in the study; tasks included assisting those in a new teaching area (tourism) in the identification of potential research fields, and working with statistics professors as they worked to apply research into students' understanding of statistics to the curriculum.

In 27 cases, researchers directed their recommendations towards others planning and initiating faculty development. Several of the recommendations in this group of studies are very specific: for example, recommendations for others adapting American faculty development programs for Russia (#93), planning and logistical recommendations for others doing multi-site programs (#54) and use of computer-mediated communication to teach a specific instructional technique (#59). Of the more general recommendations, two are for adequate time for professional development in

general (#89) and for collaboration (#86). Others include a recommendation that faculty development include pedagogical theory (#57), and that reflective groups aimed at improving teaching be situated in disciplinary settings (departments) rather than organized generically (#69). There were also specific recommendations for organizing discipline-specific groups (#375), cross-disciplinary seminars (#363) and dealing with resistance to change in mandatory programs (#347). Recommendations were generally supported by findings.

In eleven studies, recommendations are directed towards other researchers. In four of the eleven, recommendations for further research are essentially limited to recommendations for better evaluation of faculty development initiatives. The recommendations from a PBL study (#55) are mostly methodological in nature, encouraging other researchers to use qualitative description as part of their analytic approach. Researchers analysing a year-long credentialed program recommend expanded research approaches, including interviews, case studies of participants and non-participants, and student involvement; the researchers further note that instructional developers need to bring an “empirical attitude” to their work (#316, p 108). A case-based teaching session (#64) is similar in that it recommends evaluation of instructional development initiatives that goes beyond participant satisfaction. Similarly a brief workshop session’s (#65) recommendations are for continued evaluation of workshops, and a longitudinal study (#97) recommends use of a comparison group for evaluation. Longitudinal studies are recommended in other studies as well (#343, #345). In these cases, it seems to be largely researchers’ frustration with lack of findings – their sense that they still did not know all they wished to know about the initiatives they were studying – that drives the recommendations. In a way, they are supported by a lack of findings.

In four studies recommendations were directed towards other faculty participants. These were all collaborative projects: a peer-based curriculum development project aimed at making curriculum more inclusive and democratic (#8), a facilitated journaling project for professional development with feedback provided by a more experienced peer (#18), two types of peer-led discussion groups (#332) and an action research project aimed at integrating courses and encouraging critical thinking (#25). In all four cases, findings are consistent with the recommendations. These collaborative projects

supported teachers in their attempts to see their work differently; their recommendations are to others who seek the same change of perspective.

An additional 17 reports did not include specific recommendations so are not described here.

### **3.5. Meta-synthesis: Considering references to the literature, findings and methodology together**

This section begins with a summary of the most significant findings in the meta-data-analysis, meta-theory and meta-methodology analyses. At the conclusion of the section, the three sets of findings are considered together.

When insights from meta-data-analysis, meta-method, and meta-theory are brought together, the meta-study researcher will typically encounter many more questions than answers. (Paterson et al., 2001, p. 119)

The consideration of these three aspects of the initiatives does indeed raise more questions than it answers. Reading the three aspects together makes it possible to identify some themes which will be identified in the concluding portion of this section and further discussed in Chapter 4; exploring them in some detail may help to illuminate possible ways forward for instructional development.

#### **3.5.1. References to other literature**

The studies included in this meta-study refer to educational literature for a variety of purposes: as a basis for program planning, a tool for program analysis, an inspiration for modeling behaviours, as inspiration for the teaching approach used in the initiative, and as content taught to faculty participants. The centrality of the cited literature to the study varied considerably. In some cases the idea cited forms the basis for program design, execution and evaluation. In others, the literature cited seemed more peripheral to the instructional development process.

The most frequent use of the literature was as a basis for the design of instructional development initiatives. When the literature was drawn on as a basis for design, variations on the idea of reflective practice (as outlined variously by Schön (1983, 1987), Brookfield (1987, 1990, 1995) and Palmer(1998)) were the most common. In

these cases there is a clear connection between the idea drawn from the literature and program design. In some initiatives, the development of a reflective approach to practice was a specific goal. In others a reflective approach was used without being explicitly taught.

Earlier reviewers of the instructional development literature (Levinson-Rose & Menges, 1981) noted that the literature they examined mostly consisted of stand-alone studies, with few examples of initiatives clearly built on earlier ones. This has changed to some extent. Most of the studies cite at least one other article from the academic development literature broadly defined, and some also explicitly cite other studies of instructional development initiatives. This meta-study examined reports of initiatives over a ten-year period; of the 73 studies included, eight were cited by other studies in the sample. The other academic development articles cited were of various types, but review articles were frequently included. For example, Wilkerson and Irby's (1998) discussion of academic development for medical education was the most-frequently-cited reference in the case of instructional development articles for health sciences. In the instructional development literature outside of health sciences, reviews were also frequently cited, with Weimer and Lenze's 1991 review cited most frequently.

Although literature was used similarly in the design, delivery and evaluation of initiatives both within health sciences and in initiatives outside of health sciences, one significant difference was obvious from a consideration of these two areas. There were 53 papers describing initiatives in contexts other than health sciences. None of these papers referred to any literature that could be identified as being in a health sciences context. Those reporting initiatives in the health sciences, by contrast, did make reference to literature from outside their area. Based on these patterns of citation, there is a distinct sense that the two areas of instructional development see themselves as quite separate, or at least that those working in instructional development outside of health sciences do not see a clear connection between their work and the work of those working within health sciences.

The various uses of the literature serve as a reminder that research into instructional development is largely applied research in an applied field. Although it is possible to imagine examinations of instructional development initiatives designed to

evaluate theories of teaching or of instructional development, or designed to contribute to the development of theory, I found few examples of research reported in this way.

### **3.5.2. Meta Data Analysis**

As part of the meta-data analysis process, I considered the nature and level of evaluation reported in the initiatives studied. To make this review more easily comparable to systematic reviews conducted earlier by Levinson-Rose and Menges (1981), Steinert et al. (2006) and Stes et al. (2010), I applied the scales used by the earlier reviews to the studies I included in the meta-study, assigning a value from the scales to each study. (See Appendix B). Although this cross-scale comparison was not entirely straightforward (limits to the earlier scale used make it difficult to assign a level to some studies), some patterns did emerge. In particular, it was apparent that no matter what scale was used, most studies reported changes at the lower levels of the scales – that is, change in individual performance, such as teacher skill and knowledge, was reported much more often than either broader change in departments, or change in student performance.

Almost all of the studies reported at least some findings focused on individual change, including improved teaching skills and increased pedagogical knowledge. In many cases these findings were based on participant self-reports. Sometimes the self-reports were based on pre- and post-initiative estimate of skills, but other times they were simply based on participant comments after the initiative. At times pre- and post-initiative self-reports were used. Self-report was only rarely supplemented with observation.

Changes at the departmental/program level were reported in 28 of the 73 initiatives. In eight cases, the change reported was an increase in the sense of collegiality within a department or faculty. The most commonly-reported type of change at the departmental level is in change connected to curriculum: examples included the development of new courses, changes to content and changes in instructional approaches. Several of these studies were conducted by peer-based groups, using action research methods and undertaking the initiative specifically to achieve a change in curriculum.

Evaluation research, at least when a specific initiative is the object of evaluation, generally involves looking for change – finding ways in which a situation differs after the initiative, compared to before the initiative. This focus is reflected in study findings. Only two studies (#69, 345) reported that a looked-for change did not occur. This could indicate a presumption that a positive impact will result from instructional development initiatives. It could also suggest a sampling bias: initiatives where no positive impact was identified might be less likely to be reported and published, thus would be unlikely to appear in a meta-study of published literature.

### **3.5.3. Meta-methodology**

This meta-study specifically selected for inclusion studies which reported on and evaluated specific instructional development initiatives. Unsurprisingly, many of the studies are essentially evaluation research. It is striking, though, that in many cases the evaluation procedures used are narrowly defined. Many of the studies used some variation of a pre and post evaluation to determine the impact of the initiative. Often these studies concentrated on asking participants about the changes in their knowledge or skills, either through surveys or interviews. In some cases examination of work produced as part of the initiative was reviewed as part of the initiative evaluation. Observation was seldom used as part of initiative evaluation.

Narrowness was also apparent in the choice and focus of research questions. Typically the basic research question in the evaluation was, “What is effective in this initiative?” This was phrased variously:

- “The primary research question of this study was what aspects of the project [to introduce PBL across the curriculum] did the Samford change-makers (administrators and faculty) believe were important to helping them accomplish change.” (#389; Major, 2002, p. 241)
- “How did the programme influence participants’ current and future teaching practice? In what ways did the programme assist the participants to develop habits of reflective practice? To what extent did the participants find the approach used valuable? What improvements could be made to the programme?” (#368; Sandretto, Kane & Heath, 2002, p. 137)

The phrasing of questions such as these suggests an assumption that it will be reasonably unproblematic to report some positive findings.

Since the research was focused on evaluation, I also chose to explore the recommendations made in each of the studies; recommendations are a frequent and important part of many evaluations. Recommendations in these studies were variously directed towards other researchers, those planning instructional development initiatives, administrators and, in the case of four studies of collaborative projects, towards other participants in similar initiatives.

### **3.5.4. Themes emerging**

Reading the three components of this meta-study together gives rise to several themes – concerns and observations that are not apparent through a review of just one aspect of the instructional development literature, but which become apparent when multiple aspects are considered. These themes include a particular view of instructional development as a field, the influence of evaluation research, and relative inattention to context. The significance of each of these three major themes is explored below and in more detail in Chapter 4.

#### **3.5.4.1. Instructional development as a field**

It is apparent in reviewing these research projects that instructional development is two fields, rather than one: instructional development for health sciences, and instructional development focused on faculty in other academic contexts. Papers from contexts other than the health sciences never cited literature from the health sciences, and while papers from the health sciences did cite general educational references, these were typically broad conceptions of teaching such as the work of Brookfield (1995), Schön (1983, 1987), Mezirow (1981, 1991) and Freire (1971).

Within the two literatures, one change from earlier reviews is apparent. Levinson-Rose and Menges (1981) viewed the field of instructional development as a disorganized and weak one when they conducted their review, in part because so few of the studies they reviewed cited other studies. Instead, they found a literature that was largely composed of stand-alone examples. Although there are still many stand-alone studies, there are minor indications of change. Eight of the studies included in this study

were cited by others within the study. This may not be a transformational change in the field, given that 65 included studies were not cited by others within the meta-study. However, all but seven of the studies included in this study cited at least one article focused on academic development. Although it is quite weak evidence, it does provide some evidence that the field has become more coherent than was the case in the early 1980s. The issue of coherence in the field will be discussed in Chapter 4.

#### **3.5.4.2. Focus on evaluation**

Methodology and the way educational literature is used at times seem to come together to restrict the focus of instructional development activities; put another way, the way instructional development is studied reflects researchers' views of practice. This is apparent in the extent to which research focuses on individual change as an outcome of instructional development.

Many of the studies reviewed based their work in some way on the models of reflective practice and individual change proposed by Brookfield (1995), Schön (1983), Parker (2002) and Mezirow (1991). Typically, researchers identified one of these authors as influential on their work, and designed research projects to introduce participants to some aspect of the process of reflective practice. Evaluation then focused either on the extent to which the process was applied, or on participants' reflections on their own work, or both. Although it would be possible to evaluate the outcome of such initiatives beyond the individual level, it is understandable that initiatives aimed at encouraging individuals in reflective practice focus on the individual instructor and individual change.

The focus on individual change is not limited to initiatives aimed at encouraging reflective practice, however. Some of the studies included in this meta-study make reference to researchers such as d'Eon, Overgaard and Harding (2000) and others who view teaching as a social practice; the evaluation of initiatives, however, does not typically focus on change beyond the individual level. This suggests an assumption on the part of researchers that measurable change as a result of instructional development practice will be most likely seen at the individual level or that a broader perspective or how to assess it is not well understood. The impact of this focus on evaluation will be considered in Chapter 4.

Almost all the studies in this meta-study report some sort of positive outcome for participants, and very few report negative outcomes. This may simply indicate that a wide range of activities and approaches are helpful for faculty in enhancing their teaching skills, or that any collegial activity focused on teaching may have some positive effect. (It may also indicate that initiatives where outcomes are positive are more likely to be documented and published.) Many of the researchers conducting the studies were themselves involved in the initiatives they studied. This is not to suggest bias on their parts; rather, it points out a challenge in the process of evaluation where the question asked is usually something like, “Was this effective, and in what ways?” or “What works?” rather than something broader. Broader questions might include an exploration of the value of a particular initiative within the context of learning to teach; was the initiative itself worthwhile, or would the benefits have occurred anyway? It is easy to imagine studies which would show more awareness of the complexities of the environment in which university faculty work, and which could consider some of the other influences at play when they are working to enhance their teaching skills. Broader questions could also focus more attention on the theoretical literature informing instructional development initiatives. At times research initiatives reported in this study include an evaluation of the initiative’s fidelity to a particular approach; more research could also explore the usefulness of the literature that informs instructional design, further articulating or challenging these ideas.

#### **3.5.4.3. Lack of emphasis on teaching and research context**

Perhaps in part because of the tendency of evaluation to focus on individual change, there is often little emphasis on the teaching context in the studies cited. Becher and Trowler’s (1989; Becher, 1994) work on academic tribes and the importance of departmental culture is the work most frequently cited in reference to the context of initiatives. This work informs some of the studies, in the sense that they are set within departments rather than offered generally across a university community. Studies rarely examine departmental traditions in teaching, or report department-wide changes in approach arising from initiatives. They rarely report on the ways in which departments work to support change, although as Steinert et al. note, “Four conditions are necessary for change to occur: the person must have the desire to change, knowledge of what to do and how to do it, a supportive work environment, and rewards for changing” (Steinert et al., 2006, p. 509).

The exceptions are those studies focused primarily on curriculum change. Generally in these initiatives, the need for change and the desired direction of change have been determined before the initiative begins. Thus in these cases the focus on context is inherent in the design.

The purpose of instructional development initiatives is to assist faculty members in the enhancement of their teaching skills. To state the obvious, faculty members do not learn to teach only in instructional development sessions. Teaching is a situated process influenced by the experiences of those teaching, the expectations of their colleagues and students, the demands of their discipline and many other factors. Evaluating instructional development initiatives without reference to the complexities of teaching and teaching enhancement can give at best a partial picture.

### **3.6. Further discussion**

This study began with a simple research question: “What is known about the relationship between instructional development approaches and effective teaching outcomes?” The literature reviewed does not point to a neat set of conclusions in response to this question. Instead, this examination of the literature raises questions about the field itself. The fourth and final chapter will explore some of these questions, building on the themes identified in the meta-synthesis. I will discuss the significance of the field’s focus on evaluation and positive outcomes, and its tendency to neglect context. I will conclude with a discussion of the field itself, and suggestions for new and potentially more productive directions for research and practice.

## **4. TAKING A STEP BACK: META-STUDY RESULTS IN A BROADER CONTEXT**

### **4.1. Introduction**

Instructional development is both an area of practice, focused on enhancement of university teaching, and an area of research, where initiatives designed to enhance teaching are explored. Similarly, the findings of this meta-study can be considered in two ways. First, they can be examined as a way to answer my primary research question: what is known about the relationship between instructional development approaches and effective teaching outcomes? Second, they can provide a way to consider instructional development as an area of research. This secondary, and more exploratory, question will also be considered in this chapter in light of the findings reported in Chapter 3. Earlier reviewers (Levinson-Rose & Menges, 1981; Steinert et al., 2006; Stes et al, 2010) made several recommendations that, taken together, reflect a mature body of research in an applied field. These four characteristics are:

- recognize the complexity of the environments where research occurs
- build on other research in the field
- use a variety of research approaches
- triangulate data, using more than one source

These characteristics form a reasonable basis for consideration of instructional development as a research area, and will be considered throughout the chapter.

The chapter concludes with a consideration of new directions for practice and research in instructional development. It explores approaches to instructional development research and practice more thoroughly grounded in the context of academic work, focusing on methodologies that go beyond the question of “what works,” conceptual models for learning to teach that see instructional development as just one part of the mosaic, and consideration of the faculty member as an adult learner in a continuing professional education setting.

## 4.2. Instructional development in context

All three of the previously-published systematic reviews identified a need for instructional development research that recognized the complexity of the research environment. This means research that pays attention to context. “Context” is a multi-layered notion as I am using it here. It refers first to the specific academic workplace of those involved in instructional development initiatives both as participants and developers: their universities and departments, their roles as scholars, teachers and community members, and the specific classrooms and labs where they teach. Context also refers to the broader context of instructional development as reflected in the literature.

Three types of literature inform instructional development as a research field. There are two broad types of academic development literature: the literature of instructional development practice, which examines specific initiatives and is the focus of this study; and a more general conceptual literature of academic development which explores concepts such as reflection (McAlpine et al., 1999), the scholarship of teaching and learning (Brew, 2010), academic growth and development (Äkerlind, 2005, 2007), and considers the process of academic development and its likelihood of success (Roxa, Marttenson & Matthias, 2011). In addition to the literature specific to academic development, there is a broader literature about teaching and learning in higher education: for example, Carusetta and Cranton’s exploration of the development of authenticity in teaching (2005), Becher and Towler’s discussion of academic tribes (2001), and the many researchers whose focus is conceptions of teaching (Kember & Gow, 1999; Kember, 1997; Pratt, 1998; Trigwell & Prosser, 1996; Trigwell, Prosser & Waterhouse, 1999). All three of these literatures are relevant to this project.

In the process of exploring the instructional development literature, I found that much of the research examining specific initiatives is narrowly conceived, without much consideration of the many other variables that have an impact on faculty members’ development as teachers. This tendency is reflected in a narrowness of many research questions and a lack of reference to the process through which faculty members learn to teach. This narrowness creates challenges in the use of research findings for the ongoing development of research and practice. It reflects a body of research which does not typically consider the complexity of the research and practice environment, and often

confines itself to a single type of research, evaluation research, and often reports findings from only one source.

In the next two sections of this chapter, I will consider the impact of the nature of evaluation research on the practice literature. I define evaluation research simply as research designed to examine and judge the effectiveness of a particular initiative. I also explore the types of research questions that are typically posed by researchers using an evaluation approach, since an examination of research questions helps to illuminate what is missing from the research as well as what is present.

#### **4.2.1. The nature of evaluation research**

Reviews of the instructional development practice literature have consistently noted weaknesses in the literature, and reviewers have suggested that a way to overcome this is to conduct more rigorous evaluation of instructional development initiatives. All three systematic reviews, discussed in Chapter 1 of this thesis, made suggestions for this. Levinson-Rose and Menges (1981) hoped that later researchers would pay more attention to variation among faculty members, pay more attention to operationalization and definition of variables, repeat the same initiative at various campuses in the manner of clinical trials, and explore deeper cognitive and emotional experiences. The Steinert et al. (2006) review team identified the need for research to be more rigorous, using control or comparison groups, and also qualitative methodologies. They made several other recommendations, most of them consistent with evaluation research, and also hoped for more frequent use of conceptual and theoretical frameworks. Stes et al. (2010), the most recent systematic review, specifically stated that the research hopes of earlier reviewers were mostly still relevant, and further called for research focused on observation rather than just self-report, for more completely-realized qualitative research studies; and for more experimental or quasi-experimental designs including control groups. Other reviewers have made similar suggestions. Weimer and Lenze (1991) called for more sophisticated empirical studies and qualitative as well as quantitative approaches. Emerson and Mosteller (2000) called for comparison of outcomes of faculty development approaches, and investigation of effectiveness of programs targeting departments. The call for more evaluation is a common theme; there is an assumption that examining and judging initiatives themselves is a reliable way of generally improving their effectiveness.

Yet viewed from another angle, it may be this continuing emphasis on evaluation-oriented research is contributing to weaknesses in the field, rather than helping to overcome them. It can be argued that there is a difference between evaluation and research (Levin-Rozalis, 2003). The goal of research, as Levin-Rozalis sees it, is to add to scientific knowledge, where the role of evaluation is to provide useful information for decision-makers. Thus the evaluator is "...expected to determine what kind of knowledge was important, to whom it was important, how to collect it, how to process and interpret it, to decide what conclusions have been reached, and to give advice based on those conclusions" (p. 4). This sounds on the surface like the sort of research that is needed in instructional development; it is, after all, an applied field, and one is tempted to find ways in which research done in one area can be used in another. Levin-Rozalis, however, suggests that this search for generalizability may not be the best use of evaluation data.

In evaluation, however, [unlike in research which is more general in intent] the findings have to be relevant to a specific project and correct at a specific time for the project evaluated. There is no attempt to come up with findings that can be generalized beyond that project. ... That is not to say that it is impossible to obtain findings or, more often, conclusions that have value above and beyond the specific project. This happens frequently, but it is not the primary task of evaluation. (p. 7)

Levin-Rozalis (2003) further describes evaluation as something different than the kind of research that is typically done to validate theories. Theory may be used as a means of explaining evaluation results, but it is potentially damaging to the evaluation if it is used as a basis for the development of an evaluation plan.

The work of the evaluator is, in this sense, similar to the work of a doctor or a psychologist, who examines a particular patient, looking at that patient's unique history and conditions. Doctors and psychologists then find validation for their findings and assumptions in the available research and pertinent theory. In the same manner, evaluators base their work on wide professional and theoretical knowledge in the various fields they deal with. When the doctor is treating a patient, she is not validating a theory unless she is doing medical research, yet she relies on the knowledge gained from research. Thus, evaluators, relying on theoretical knowledge, do not attempt to validate a theory. The attempt to draw hypotheses from some specific theoretical framework will limit the scope of the evaluation and prevent the evaluator from making hypotheses that do not arise from this theoretical framework. The theoretical framework dictates the concepts we use and their expected relationships with each other. In an evaluation, a theory that is suitable to the project can be

chosen at a later stage, when the evaluator is drawing conclusions and explaining the findings. (p. 10)

Levin-Rozalis (2003) states:

Researchers choose their research questions according to their area of knowledge and the question's interest and importance to the researcher. Evaluators choose them according to the probable usefulness of the answers in the project they are serving: in other words, according to their relevance to the project. (p. 20)

If this is true for those who do evaluation research within instructional development, it is not reasonable to expect the same type of research to lead to increased coherence and depth in the field. Increasingly rigorous evaluations could lead to deeper understandings of particular circumstances, but are not likely to enhance theoretical development that could be broadly applicable. This lack of theoretical development, one way in which the literature of instructional development seems not to build on earlier research, may be in part a result of the focus on evaluation.

Webster-Wright (2009) conducted a scan of research in professional development in several fields (including teaching), and concluded that this focus on evaluative research is common in the broader field of professional development. (She did not include instructional development for post-secondary education in her scan, but did include professional development for elementary and secondary school teachers.) She notes:

Evaluative research often compares methods of delivery of professional development through evaluating learning outcomes, focusing on evaluating solutions to the problem of learning rather than questioning assumptions about learning. The focus is on expert intervention to "develop" professionals rather than on supporting ongoing professional learning. In addition, the majority of this research focuses on specific factors affecting professional development (the program, learner, or context) rather than studying the holistic, situated experience of learning. (p. 711)

In this paragraph, Webster-Wright could be describing the bulk of the literature of practice for instructional development in universities. The most current systematic review of the literature, conducted by Stes et al. (2010), focuses explicitly on the evaluation of learning outcomes; the most frequently reported findings in this literature are those reporting individual changes in teaching approach based on participation in instructional

development initiatives. Stees et al. described few examples of studies describing a “holistic, situated experience of learning” as part of the discussion of an instructional development initiative – few examples, for instance, of ways in which initiative participants were encouraged to consider what they were learning in light of what they had already learned through practice. Similarly in my consideration of study findings, I found few examples of this type of integration. In the next few sections of this chapter, I will consider the ways in which this consideration of the situated experience of learning is and is not evident in the practice literature included in this meta-study.

#### **4.2.2. Framing the research question**

Biesta (2007) argues that the research of evidence-based practice assumes that what professionals do is intervene – hence, it is assumed by such research that one can measure change in practice by evaluating the success of interventions. Thinking of Biesta’s definition in terms of instructional development, what is really being analysed in this literature, in the majority of cases, is the work of the instructional developer (when they are the designers of initiatives, and/or deliver them), as much as the impact the work has on the faculty member participating in the initiative and the way university teaching is ultimately done. If interventions are the “what” in “what works,” perhaps instructional developers are the “who” – and the “who” is not frequently discussed in detail. The “what works” focus is very much in evidence in research into instructional development initiatives, although the focus on the details of work done by those planning and delivering the initiatives – those making the interventions – is sometimes not clear. When research questions are essentially framed as “what worked in this initiative,” there are limitations to research findings. The focus is on the initiative, not on the broader background against which it is situated and not explicitly on the actions of instructional developers and the assumptions underlying their choices in planning, delivering and evaluating initiatives. This makes it difficult to generalize, and even to synthesize findings.

The study of some initiatives does involve research questions that are broader, and go beyond “what works”. In rare instances the research approaches the sort of theory-testing and articulation identified as important by Kuhn (1962) and by Paterson et al. (2001). For example, #927 explored the idea of a “community of practice” perspective (Lave & Wenger, 1991) in a mathematics department, asking how the perspective could

inform discipline-specific instructional development. This approach helped the researchers, themselves peers in the department, explore not just the initiative they developed but also the relevance of the idea of a community of practice and its utility as a planning framework for instructional development in a departmental context. Because the researchers had this in mind, they were able to identify surprising weaknesses in the underlying idea. Their goal in the series of seminars they planned and facilitated was to encourage professors to use a student-centred approach to teaching. Lave and Wenger would suggest that if this approach represents expertise, less-experienced members of the community would learn it from those who were expert. In this case, researchers found there were no community experts in the practice – essentially no “old timers” for newcomers to model their teaching behaviour on. This is perhaps common if a new teaching approach is being introduced, and it is only by expanding the research question beyond a focus on outcomes that the situation is identified. In this case, the Lave and Wenger idea of communities of practice was intended to serve as the rationale for the instructional development initiative. Exploring its effectiveness in this way, particularly in conjunction with a consideration of program outcomes, helps readers get a sense of the significance and potential value of the rationale underlying instructional development initiatives.

There are other examples of papers that take a broader focus; for example, MacDonald’s report of the reworking of the first year curriculum change in an Australian school of engineering (#51) indicates major changes in the approach to teaching, based on extensive and rigorous examination of the major course concepts in all first year courses by teams that included all those with teaching responsibilities, from senior faculty to teaching assistants. The rarity of these contextually-grounded initiatives, though, or at least the rarity of reporting of context, makes them memorable. In most cases, the teaching context of the faculty development initiative is described only briefly, if at all, and the impact beyond the individual is not reported in much, if any, depth. For instance, of the 21 studies that report impact at the departmental or program level, eight reported enhanced collegiality as the sole departmental impact. (See Table 3.12 and 3.13 for a summary of the scope of impact reported.)

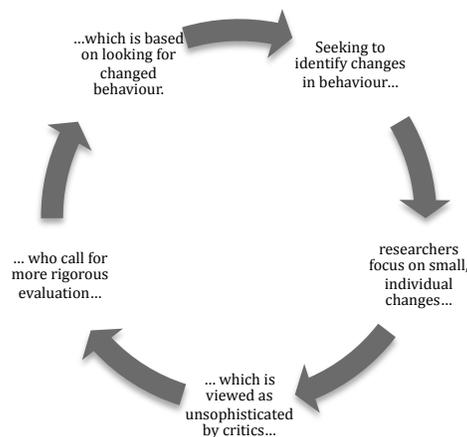
As Maturana (1988) said, everything observed is observed by an observer. In research into instructional development practice, the observer is frequently someone who is involved in the design and delivery of faculty development programs. (This was

true for researchers in at least 35 of the 73 studies included.) This finding matches Clegg's (2009a) observation:

Accounts of academic development initiatives, in contrast to the dominant research paradigms on student learning and/or higher education, are predominantly self-authored narratives of practice, even when the authors write in both voices and are both researcher and developer. (p. 410)

Although not everyone who works in instructional development would hold the same perspective, it is reasonable to suggest that they are all seeking to identify changes in teaching practice that come about because of the initiatives they have designed and delivered; these positive changes would represent the value of their work and their success as professionals. This desire to identify measurable change may lead to a narrowing of research questions. To an extent, researchers find what they look for. If they are looking for changes in reported behaviour attributed to their work or their design, that is what they are most likely to find. The resultant 'vicious circle' is illustrated in Figure 4.1.

**Figure 4.1 The narrowing of research questions**



As the diagram illustrates, researchers focus on individual changes because they are seeking to identify change resulting from initiatives, and individual behavioural change is the easiest to measure. Critics of the research view this as unsophisticated, and call for increased rigour in evaluation. The idea of more rigorous evaluation is translated into a search for simply clearer changes in behaviour. Stepping out of the

circle, and looking more broadly at the context in which academics learn to teach and the ways in which initiatives may contribute to this, might be one way to break the cycle.

Like any generalization, though, this diagram doesn't show the whole picture, and overlooks some of the subtleties of the field. There are examples of initiatives where impact is considered beyond the individual level, as Table 3.11 shows, including some that discuss significant changes at the departmental level and beyond. (For example, #51 documents the process of the redesign of a first-year engineering curriculum; #21 reports university-wide changes, including a revision of the university's mission statement, based on a program in sustainability.) There are also examples of initiatives where participants themselves are involved in the design of the initiative and they determine what a desirable outcome for the initiative, and for them, would be. And there are examples of research focused on the context of teaching in university that do not include evaluation of specific initiatives. For example, initiative #376 is a phenomenographic examination of university teachers' exploration of the connection between disciplinary research and teaching. The outcomes identified ranged from changes in curriculum content to changes in teaching approach to other, more individual, changes as evident in the following:

As an example, one participant undertook research on the characteristics and potential markets for eco-tourism. This resulted in changes in the content of his teaching unit, a problem-based assessment task for his students, and his own enrolment in a PhD programme. (Reid & Petocz, 2003, p. 110; #376)

Researchers credit the program with dramatic changes in their university, including changes in the learning environment for students, improvements in academics' working conditions, and increased support for further study on the part of academics at the university.

Reference to broader research into teaching and learning, one way in which this type of research could build on research done elsewhere, could also help frame broader research questions. For example, Åkerlind (2005, 2007) conducted two phenomenographic studies of university faculty's experience of teaching. In her earlier study (2005), she identified multiple meanings faculty members assign to the idea of "development," including increasing work productivity, achieving academic credibility, developing understanding and contributing to disciplinary growth. Her second study

(2007) focused on academics' understanding of what it meant to improve as a teacher. She identified five themes, including better knowledge of content, more practical experience, development of a repertoire of teaching strategies, and determination of what does and does not work for both students and teacher. Carusetta and Cranton (2005) researched authenticity in teaching, conducting a multi-year research study that asked faculty members to reflect on how they had developed an authentic approach to teaching. This type of research, not directly associated with instructional development initiatives, highlights an important point about faculty and instructional development that may be overlooked in some designs: faculty members themselves have ideas about what would be most useful in assisting them with teaching enhancement, and incorporating their ideas into the design of an instructional development initiative could contribute to both more compelling research and more effective initiatives. Research and evaluation that focuses narrowly on the outcomes of initiatives may lack a critical perspective that could contribute to improved instructional development practice.

As discussed in Chapter 1, reviewers of the instructional development practice literature have consistently identified the need for more rigorous evaluation. Successive literature reviews have used variations on Kirkpatrick's (1979) evaluation scale to classify the relative sophistication of the outcomes of the studies they reviewed. (See section 3.3.1 for an analysis of these evaluation scales.) Yet the reviewer's focus on evaluation, and the scale itself, limits both the research questions and the types of outcomes that are captured and reported. The various evaluation scales emphasize individual change, and contribute to a narrowing of research focus.

Scales have become more sophisticated over the last three decades, but no matter how they are adjusted the focus on the intervention confirms Biesta's (2007) comments that professional work is essentially seen as "intervening." What is documented by the research studies, and compiled in the systematic reviews, is the outcome of interventions – the contributions made by those who intervene. This type of research into practice prioritizes the instructional development initiative, without necessarily placing it in the broader context of individuals learning to teach. This focus on interventions, rather than the impact of interventions in the broader context of the learning-to-teach process narrows the range of what can be understood from the research; it is particularly problematic if it is assumed to be a complete picture of the process of learning to teach.

#### **4.2.3. Considering the learning-to-teach process in instructional development planning**

Professional learning does not occur entirely, or even primarily, as a result of initiatives specifically designed to enhance that learning.

Professionals learn, in a way that shapes their practice, from a diverse range of activities, from formal professional development programs, through interaction with work colleagues, to experiences outside work, in differing combinations and permutations of experiences. (p. 705, Webster-Wright 2009)

In the case of university faculty considered as professional teachers (while acknowledging this is only one part of the role), the learning process begins years before the first teaching position is attained and continues in relationship with colleagues, administrators and students, whose expectations all help to shape teaching behaviour. This phenomenon has been discussed quite extensively in the literature of K-12 teacher education (Britzman, 1991; Hollingsworth, 1989; Kane, Sandretto and Heath, 2002, among others).

The story of learning to teach begins actually much earlier than the time one first decides to become a teacher. The mass experience of public education has made teaching one of the most familiar professions in this culture. Implicitly, schooling fashions the meanings, realities, and experiences of students; thus those learning to teach draw from their subjective experiences constructed from actually being there. They bring to teacher education their educational biography and some well-worn and commonsensical images of the teacher's work. In part, this accounts for the persistency of particular worldviews, orientations, dispositions, and cultural myths that dominate our thinking and, in unintended ways, select the practices that are available in educational life. (Britzman, 1991 p. 3)

In a summary of existing K-12 research on the influence of these beliefs on those entering pre-service teaching programs, Kane et al. (2002) reported that research indicates beliefs based on experience as students are "robust and resistant to change," and that they "act as filters allowing in or filtering out new knowledge that is deemed compatible or incompatible with current beliefs" (p. 180). Britzman (1991) notes of pre-service K-12 teachers: "by the time a person enters teacher education, she or he has spent approximately thirteen thousand hours observing teachers" (p. 3). The new faculty member typically would be able to add additional hours of observation in graduate school to that tally; this influence at least on initial teaching approach cannot be

discounted. As new faculty members in higher education, individuals may bring similarly well-worn beliefs to those held by pre-service K-12 teachers, perhaps confirmed by earlier experience as students, instructors or tutors in the community of practice that is higher education in their discipline. There they encounter students who hold their own habitual expectations of teaching and teachers, and who act in ways that demonstrate those expectations. Instructional development initiatives in higher education must also be situated in the context of these other potentially more important influences on the development of teaching skills.

Faculty members may also encounter other situations which constrain their attempts to try new teaching approaches. Faculty members may be required to work with curriculum that is pre-set and not open to change (for an example, see Bernacchio et al., 2007, study #8 in this meta-study; the pre-set nature of curriculum was identified as a tension in teaching by one of the initiative participants). They may, on the other hand, work in departments where colleagues do not provide even historical syllabi for new faculty members' reference and where teaching ability is assumed and unsupported (Boice, 1991). In either situation, new faculty members may struggle. Educated as experts in an area of content and hired for that reason, many may fall back on a lecturing approach likely familiar from their own education, what Boice describes as "facts-and-principles style," focusing on content and assuming that the responsibility for poor teaching ratings lies with ill-prepared students rather than their own approach. This is particularly significant since initial teaching approach may itself be the strongest influence on ongoing teaching approach. Boice, in his longitudinal study of new faculty, found that in general teaching approaches did not change over the three initial years of teaching that were the focus of his study.

Given the potential significance of these beliefs, it is puzzling that so few of the instructional development initiatives examined in this meta-study included a study of prior knowledge or beliefs as part of the initiative. There are some exceptions. Some initiatives were specifically designed to shift participants' conceptions of teaching, and these typically included pre- and post-initiative testing of those perceptions. For example, #48 analyzed pre- and post-initiative interview data focused on conceptions of teaching. Initiative #354 interviewed participants immediately after an initiative and then again later to see if their conception of teaching had changed, finding in some cases that it had. Initiative #345, by contrast, used a pre- and post questionnaire about instructional

beliefs and concluded that these beliefs were largely unchanged by initiative participation, noting the difference from initiative #354. Another study, #364, was intended to determine whether or not a process of reflection could encourage faculty to adopt more student-centred approaches to learning; consideration of initial conceptions of teaching was part of that initiative, too. I found only one other example of research that identified a possible link between faculty members beliefs about teaching and the likelihood of their making changes in that teaching approach based on an instructional development initiative (#69); in this case the study was conducted by someone who was not involved in the design or delivery of the initiative. I did not find examples of initiatives that began the planning process with an examination of the way things were historically done in the department or teaching area.

Prior needs assessments<sup>27</sup> generally were not commonly reported. In total five of the 73 studies mentioned a needs assessment as part of planning; in one additional case, #74, participants learned to conduct a needs assessment as part of the process of enhancing their own instructional development skills. In no case did the discussion of needs assessment include recognition of the importance of determining faculty member's beliefs about effective and desirable teaching practice. The acknowledgement of adult education theory and practice is clear in the theory used to support instructional development, particularly in the frequency to which Mezirow, Brookfield, Knowles and others with strong adult education connections are cited; in many cases, though, the basic processes of adult education (including needs assessments that identify and acknowledge participants existing skills and expertise) seem not to be applied in planning. Reporting needs assessments, in cases where they were conducted, would make it easier for other researchers to build on what has already been done, and by clarifying the context of the research would also help practitioners in their attempts to apply research.

Reflection on the process of learning to teach also raises larger concerns with the research on instructional development. If these beliefs are indeed robust and resistant to change, it seems likely that they would have more influence on classroom

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<sup>27</sup> There are many definitions of the term "needs assessment." Here I use it quite generally to mean simply a pre-initiative planning process whereby those considering ways to enhance instruction work with faculty providing the instruction to determine their perceived needs, and identify other apparent needs based on observation, review of student ratings, or other data.

behaviour than would short-term instructional development initiatives. This raises the possibility that instructional development initiatives, however well designed, may not be particularly influential. On a more mundane level, it suggests that those evaluating initiatives should include observation of teaching in their evaluation, to see that changes reported in individual teaching behaviour are in fact occurring in the classroom or that changes reported in teaching beliefs actually influence teaching behaviour. Study findings are rarely triangulated in this way, however. Few of the studies included in this meta-study included observation of teaching as a way of evaluating the success of the initiative. Instead, they relied on self-report. Similar flaws have been noted in studies of conceptions of teaching and beliefs about teaching held by post-secondary teachers, and thought to strongly inform their actions. Kane et al. (2002) found that most studies in this field assumed teachers' practice was reflective of their beliefs.

As Åkerlind (2005) noted, the literature on academic development has tended to focus strongly on delivery options and the development of teaching. The focus on teaching enhancement, compounded by the methodological narrowness of the literature, has perhaps made it inevitable that broader issues in the process of learning to teach have been overlooked. Ironically, this narrower focus may make the instructional initiatives themselves less successful. Åkerlind's research into academics' perception of their own growth identified a more integrated way of looking at professional learning, involving increased ability and confidence both as researcher and teacher, among other roles. This research may suggest that academics would prefer a more integrated approach within broadly-defined academic development initiatives, rather than narrow instructional development initiatives focusing on only one aspect of their professional role.

At the same time, the importance of skills-based instructional development for teachers at the post-secondary level should not be discounted. Development of confidence in teaching, particularly for new faculty members, may be a necessary precondition for the development of more sophisticated pedagogical content knowledge. Hollingsworth (1989), in a study of pre-service K-12 teachers in two cohorts, identified the importance of addressing both initial beliefs and the development of instructional management skills before teachers could develop more sophisticated understandings of teaching:

Both within and across case studies from the two cohorts, categorical themes stood out in the data suggesting that *preprogram beliefs* served as filters for processing program content and making sense of classroom contexts, that *general managerial routines* had to be in place before *subject specific content and pedagogy* became a focus of attention, and that interrelated managerial and academic routines were needed before teachers could actively focus on *students' learning from academic tasks in classrooms*, while preprogram interest students as individuals and a program-developed interest in subject pedagogy were needed to provide the motivation to do so. (p. 168, emphasis in original)

More research in this area might help determine if a similar situation applies to new university faculty. It might be the case that early opportunities for new faculty members to enhance instructional skills connected to general management of teaching responsibilities could free them for a more rapid focus on the development of their subject-specific pedagogical knowledge and of more sophisticated teaching skills in general. It might be particularly important to make this goal explicit for new faculty, letting them know that confidence in the basics would free them to focus on the ultimately more significant specifics of teaching in their own discipline. (Of course the possibilities for debate on what constitutes “basic” would be considerable; such a debate, though, would have the potential to involve faculty in all disciplines, and could be valuable in and of itself.) In the case of university faculty, subject specific knowledge is a given; Hollingsworth’s (1989) contention that routines precede development of content knowledge may not be applicable to them. The development of pedagogical content knowledge, though – what Hollingsworth describes as knowledge of students’ learning from academic tasks – may indeed be something that only happens once the basics of managing the teaching role are in place.

In this context, it is useful to consider Ramsden’s (1992) analysis of the steps individual teachers take in developing a more sophisticated view of teaching and learning. Ramsden argues that educators progress from a focus on the transmission of their own content knowledge, through to a focus on the learning activities being undertaken by students, and finally to a focus on student learning itself, and a primary concern with helping to facilitate that learning. Ramsden did not particularly focus on the managerial tasks required to successfully transmit content knowledge. His second two stages of understanding of teaching, however, echo Hollingsworth’s (1989) notion that basic classroom management skills must be in place before new teachers can focus on pedagogical content knowledge and student learning.

None of the studies included in this meta-study used Ramsden's levels of teacher understanding as a framework for program design (or any other such framework). However, a review of the instructional development activities in this meta-study does indicate that not all are pitched to the same level of outcome for faculty. Some initiatives clearly focus on strategies for better presentation of content (for example, #3 and #54), something Ramsden would suggest encourages the development of first-level teaching skills. Many focus on broadly-conceived teaching techniques – an array of different approaches for involving students with course content, ranging from workshops in problem-based learning (#20) to year-long programs encouraging participants to use multiple approaches in the classroom (#58). Such focuses on classroom activity match Ramsden's description of second-level skills. Others specifically involved development of teaching approaches to enhance and assess student learning, matching Ramsden's third level, including complex curriculum development projects that, in one case, involved the complete redesign of an engineering curriculum (#51). It seems likely that initiatives at all three levels are potentially useful for faculty members, depending on their level of development as teachers. Using such a framework as a way of situating instructional development initiatives could be a useful way to approach the organization and presentation of instructional development initiatives. At the very least, from the perspective of practice it might help avoid the sense among faculty that instructional development initiatives are typically and simply unsophisticated presentations of generic teaching tips. Initiatives aimed at helping faculty learn the technical skills of teaching would perhaps be more welcomed if they were clearly identified as basic steps.

#### **4.2.4. Building on the work of others**

Many of the recommendations from studies included in this meta-study were directed at colleagues working in instructional development roles. This seems useful; instructional development initiatives could profitably build on those conducted earlier, just as research can build on earlier research, and the lessons learned in one location might be applicable elsewhere. However, the lack of description of context may be a limitation in how useful these recommendations really are. Faculty members develop their teaching skills in complex environments. Participants in instructional development initiatives are at various stages in their careers. They teach within different disciplines. Some teach required first-year introductory courses, while others teach advanced

graduate courses to Ph.D. students. As Stes et al. (2010) noted, more detailed descriptions of initiatives, including of their context, would make it easier for both researchers and practitioners to build on each others' work in the field.

I found few examples of cases where researchers directly built on the work of others. One example was in two of the initiatives focused on shifting participants' conceptions of teaching towards a more student-centred approach. Researchers who conducted initiative #345 specifically compared their findings with those of initiative #354, reporting that they did not see the same shift in conceptions of teaching the earlier study had reported. This was an exception, though. As reported in section 3.4.3, studies frequently made recommendations directed at others planning instructional development initiatives, and at administrators responsible for them. There were a few examples, however, of studies that specifically mentioned following the recommendations made by other practitioners.

### **4.3. The practice of instructional development**

This research posed the primary question, "What is known about the relationship between instructional development approaches and effective teaching outcomes?." It is difficult to answer it conclusively, based on the findings of this meta-study. As discussed in Chapter 3.5.4, themes did emerge. Widely varying approaches to instructional development are welcomed by faculty members. Individual change in teaching approach, most frequently documented through self-report, is the most frequently reported outcome. As discussed throughout Chapter 3, there are indications of successful initiatives in instructional development: yet the findings, and the research literature generally, do not support a clear answer to the research question.

To pose the research question is to an extent to ask what happens, and perhaps what should happen, in instructional development initiatives. Given the rather unsatisfying nature of the response to the research question, it seems important to consider what the research as reported reveals about the practice of instructional development, and how the practice may itself contribute to the difficulty of answering the research question. It is important to remember here that practice and research in instructional development is entwined; as discussed in Chapter 3.1.1, individuals are often both researchers and practitioners.

Clegg (2009a) maintains that the focus in academic development has shifted away from the individual teacher and towards a strategic approach at the institutional level. It is not easy to see this shift in the literature of instructional development analysed in this meta-study. This may in part reflect my research focus on studies reporting empirical evidence from specific initiatives. With some exceptions, mostly involving curriculum redesign, few interventions seem to be focused in accordance with this perceived strategic shift. Clegg's point partly arises from the variety of roles academic developers identify as theirs: as she notes, organizations such as the United Kingdom's Staff and Educational Development Association and the United State's Professional and Organizational Development Network, among others, identify a range of appropriate roles ranging from the provision of learning resources and support to making contributions to institutional strategy on teaching and learning. Not surprisingly, perhaps, the instructional development literature analyzed in this study focuses mostly on the provision of resources, and less on strategic directions.

Universities invest considerable resources in instructional development, whether directly through the establishment of centralized units for instructional development or through support of the work of faculty members themselves involved in collaborative instructional development initiatives. The two types of initiatives – peer-developed and centrally-developed – may be quite different in their approach. In cases where a central unit is responsible for delivery of instructional development, there is sometimes a sense of separation between the two worlds – the world of faculty in teaching roles, and the world of instructional development. This is apparent in some of the initiatives included in this study, perhaps most obviously in initiative #69. This study examined the experience of four participants in a year-long program for new faculty; two of the participants found it irrelevant to their experience, while two felt it was relevant because they had learned some teaching tips. (Those responsible for the design of the initiative were not interviewed as part of the research, but it seems unlikely that their goal for a year-long program was simply dissemination of teaching tips.) Advance planning of initiatives without an explicit focus on determining the needs of faculty and their own assessment of what they feel would be most useful in enhancing their teaching skills may tend to contribute to an “us” (developers) and “them” (faculty) separation between these groups of professional colleagues. This mindset, operating on both sides, may contribute to the sense among potential instructional development participants that what is primarily to be

learned is decontextualized teaching tips which might be somewhat useful but are hardly central to their role. The idea that instructional development equates to teaching tips may reinforce a notion that teaching is essentially an unproblematic technical skill, perhaps not worthy of the attention that must be given to discipline-based research.

The university structure, where centres for the enhancement of teaching and learning are often centrally funded, may exacerbate this division. At the very least, it requires faculty developers to work in two different ways:

The key to successful dissemination across the higher education sector is to reconcile the inherently 'top-down' nature of centrally-funded development work with the 'bottom-up' nature necessary to take account of local circumstances and individual teaching styles and to imbue *the perception that materials have been developed in response to specific local needs*. (Sharp and McLaughlin, 1997, p 323-324, emphasis added)

The idea of working in such a way as to create a perception of need, instead of actually determining faculty members' needs, is troubling. Certainly it is contrary to the principles of adult education espoused by Knowles (1980, 1990) and others, and at times cited in the instructional development literature. It seems to simply accept the "us vs. them" division, reinforcing a sense that faculty developers somehow "know best," and can prescribe appropriate solutions for all kinds of instructional situations. The concept of "dissemination," though, contains another message the authors may not have intended. It very clearly suggests that there are ideas, techniques or approaches about teaching that are solidly understood and known at some particular location, and can be transmitted to others in such a way that they will perceive that what is transmitted was created in response to their needs. This may be a cynical reading of Sharp and McLaughlin's (1997) point, but it clearly does point to an idea of knowledge as a separate, transmissible something that can be held by some and given to others. When the knowledge in this case is knowledge of teaching, it also contributes to the sense of teaching as easy technical skill, and the sense of the teaching role as something that can be performed unproblematically by anyone with content knowledge and a few straightforward techniques. There are instructional development initiatives that challenge this idea, most notably initiative #376, which explored the relationship between research and teaching and involved participants in a variety of self-initiated research projects they designed to enhance their teaching. This type of approach seems to appreciate the

complexity of the teaching role more fully. Certainly the idea of teaching as technique is not the only way of thinking about university teaching.

#### **4.3.1. The nature of knowledge of teaching**

Considering knowledge of teaching as one type of content knowledge helps to situate it in a broader discussion of how things are known. Thinking of how things are known is an important component in the development of an understanding of how to promote the development of knowledge – that is, how to teach, and help others to learn. As discussed in the preceding paragraph, the idea of teaching enhancement as the adaptation of various context-free and generic techniques positions teaching as an unproblematic act that does not vary substantively with context. To do this is to view “teaching knowledge” itself as a decontextualized object – the same way in which aspects of subject content can be defined as simply a collection of facts. As Davis and Sumara have discussed, this is not the only way to think about knowledge, and not the only way to think about knowledge of teaching. It is possible to think of the teaching and learning process (whether the subject area is instructional development, or some other content area) not as the transfer of knowledge from one person to another, but rather as something that occurs in the interaction between individuals, and between individuals and their world:

What happens if we reject the pervasive knowledge-as-object (as “third thing”) metaphor and adopt, instead, an understanding of knowledge-as-action – or, better yet, knowledge-as-(inter)action? Or, to frame it differently, what if we were to reject the *self*-evident axiom that cognition is located *within* cognitive agents who are cast as isolated from one another and distinct from the world, and insist instead that all cognition exists in the *interstices* of a complex ecology of organismic relationality? (Davis & Sumara, 1997, p 110)

This exploration of ideas of knowledge may seem like a bit of a departure from a consideration of the location of instructional development within the university, but it is a concept that is important for teaching whether the content being taught is the subject-specific content taught by university faculty, or the teaching-specific content about teaching itself taught by instructional developers. It addresses the idea of knowledge and suggests that knowledge of something (for example, of how to teach) is not located outside of the teacher and the context as a separate thing that can simply be attached to something else. Instead, knowledge of an aspect of teaching would always be

knowledge of an aspect of teaching a particular thing to particular people in a particular context. Put another way, it suggests that real understanding only exists and only unfolds in the actual action of teaching; it is something that is created by the teacher and the learners in the context, not something that is imported or held only by the teacher – and hence not something that can be acquired elsewhere and brought to a class in an unchanged/unchanging way. It is also important to consider what this means for instructional development itself as a location of the creation of the knowledge of teaching. Do typical instructional development sessions position the teacher/student as an unknowing one, there to receive objective external knowledge? What does this positioning do to the likelihood of successful learning, and how does defining learning about teaching as something that can be successful in this way affect the faculty member's view of their teaching role? What is really learned? Does a decontextualized and hence perhaps simple approach to teaching actually encourage faculty members to devalue their teaching role? Or is the main lesson given to the hapless faculty member, "It's really quite easy, and you have been doing it wrong?"

#### **4.3.2. Positioning of expertise in instructional development**

When faculty developers discount the significance of context, an "us vs. them" dynamic may develop between those participating in the faculty development initiative and those presenting it. Part of this dynamic involves the positioning of expertise. One role of those who work in instructional/faculty development units is to identify the things they feel faculty members need to know, and those in the units frequently position themselves as the experts who have this knowledge to share. To an extent this is inevitable; there is a literature on teaching, and those who work in instructional development are typically very familiar with it. There are applicable educational theories and there is no reason why educational expertise cannot be shared with those who are practicing educators in various disciplines. However, instructional developers are not experts in the teaching of every discipline. When they are positioned as The Experts in teaching, without reference to what is taught, what is lost is what Shulman (1986) refers to as pedagogical content knowledge: the knowledge of how to teach a particular discipline. Lack of attention to context, therefore, could be seen to undervalue the expertise of those participating in the faculty development initiatives, by assuming, or seeming to assume, that the instructional developers are the experts in teaching, and those who participate are unskilled novices.

For most academics, discipline (often though not always synonymous with the department) is the primary point of identification as scholars and teachers (Becher, 2007). Just as beginning teachers view new teaching ideas through a filter of their own preprogram beliefs (Hollingsworth, 1989), so can faculty both new and experienced be expected to view what is taught in faculty development initiatives through a filter of departmental and disciplinary practice. Although this is sometimes viewed dismissively as mere resistance to new techniques by those working in faculty development, it may represent as much as anything thwarted pedagogical content knowledge, which could itself, if acknowledged, be a rich source of learning within instructional development initiatives.

The centralized model of removing a faculty member from their academic context to attend, for example, a workshop may make it difficult for them to successfully evaluate whether or not a particular teaching approach they learn in the workshop will be useful.

As the learner learns, the context changes, simply because one of its components changes. Conversely, as the context changes, so does the very identity of the learner. Cast against a different set of circumstances, caught up in different sets of relationships, how we define ourselves and how we act is inevitably affected. And so, learning (and similarly, teaching) cannot be understood on monologue terms; there is no direct, causal, linear, fixable relationship among the various components of any community of practice. Rather, all the contributing factors in any teaching/learning situation are intricately, ecologically, and complexly related (Davis & Sumara, 1997, p. 111).

The entangled ecological reality of the processes of both teaching within a department, and being a learner in an instructional development initiative, render transplantation of ideas from one context to another difficult. As Lave insists, there is no other kind of activity except situated activity (Lave 1996). However, instructional development is typically not done in the context where people teach. There are exceptions to this, of course; some of the initiatives reported in this meta-study were situated within departments and focused on department-wide changes to teaching practice. (See for example the GRASP project devoted to increasing retention of engineering students (# 58), the curriculum redesign for first- year engineering that involved all teachers from senior professors to teaching assistants, where instructional development professionals visited classrooms and made suggestions based on their observations (#51), and the chemistry teaching project focused on getting students to do

more applied work and less rote learning which also involved instructional development work situated in the classroom (# 24)). Notwithstanding these exceptions, the instructional development initiatives in this meta-study are not generally focused on the individual's knowledge of their discipline or academic culture. If knowledge is presented as unproblematic and transferable, it may make things worse rather than better for those who attend. Instructional developers are in essence saying, "Come join us in this entirely uncomplicated and uncomplex teaching environment where we will teach you how to do something... then go back to your own equally uncomplicated and uncomplex teaching environment, translate it into something you can use and apply it." Teaching contexts are both complex and complicated; faculty development initiatives presented unproblematically would seem to be doomed, if not to failure then at least to a lack of success.

As Davis, Sumara and Kieren (1996) wrote in the context of mathematics education, "Like any social event, learning is a complex phenomenon; it resists the linear and causal reductions that are often imposed in misguided efforts to control it" (p 153). Attempts by faculty developers to assert their right to be the experts in situations of teaching and learning may be one of these misguided attempts at control.

#### **4.3.3. Undervaluing of practice: the danger of decontextualization**

Undervaluing of practice happens in two senses: undervaluing the expertise that participants bring with them, particularly in the form of their content knowledge and pedagogical content knowledge (Shulman 1986) and also in undervaluing or underestimating the difficulty of making real change to established practices, particularly given that those practices are enacted in a specific location, with other people. In both cases this undervaluing could be done by instructional development practitioners, and also by the faculty who participate in instructional development.

In some of the initiatives studied, participants reported reactions to the introduction of educational theory that clearly indicated that they saw it as something very different and outside of their usual field of work. Some expressed surprise that theories of pedagogy existed (#57); others indicated that a year-long program was valuable simply because they had learned "teaching tips" (#69); they seemed not to identify the utility or even the presence of pedagogical theory at all. Others expressed

annoyance at what they saw as the excessive use of jargon in initiatives, feeling that educational concepts could be explained without technical language (#368). In all three of these cases, the sense of educational knowledge as something foreign and not tremendously useful to university teachers outside the discipline of education is clear.

Davis and Sumara (1997), researchers in elementary education, write about the challenges of changing their own teaching behaviours to more closely align to their beliefs about teaching and learning. They describe co-teaching classes in an elementary school, and finding themselves doing things like posing questions to which they already had an answer in mind, something they did not believe to be useful. They found that although they could see others doing this, they rarely noticed their own behaviour.

In brief, not only did we tend to fall into conventional patterns of acting, we also were unable to notice and/or to attend to such patterns, let alone avoid them. Further, even when we were able to catch ourselves, the process of formulating and enacting alternatives proved to be quite challenging. (1997, p. 113)

In writing further about these difficulties they discuss how they and those they were teaching with tended to change towards each other, picking up expressions and ways of being without consciously setting out to do so. To them,

... it became evident that our actions were not autonomously constituted. Rather, we were playing our parts in a larger whole, in many ways filling the roles we were expected to fill and behaving in the ways we were expected to behave. We were being conducted more than we were conducting. (Davis & Sumara, 1997, p 114)

Thus their teaching was shaped and controlled by context, as much as by conscious intent. And this is when they as researchers were specifically *in* the classroom to try to do something different, as part of a research study! The article concludes with Davis and Sumara's reflections on teacher education. They see that it has been decontextualized and focuses not on the complexity of the interactions between individuals and all of their contexts, but rather very narrowly, on the management of students and the planning of instruction (planning to deliver decontextualized "knowledge"). What they say could just as easily apply to instructional development in the university setting.

The ideas behind these notions of teaching not simply as technical skill or craft, but as deeply embedded social practice (d'Eon et al., 2000) apply not only to teaching,

but to any complex interrelationship of people. We are not simply thinking agents who arrive in new settings able to act autonomously and in line with what we consciously are determined to do. Rather, we arrive in our new settings shaped by the context we are in already, and influenced in ways we may or may not know by past contexts that had an impact on us. When we act, we are not acting with complete independence. Our actions are situated in particular locations and shaped by those contexts, and contexts include the expectations of others within it. As a teacher, I might ask rhetorical questions because I've learned to do that from many years of seeing other teachers do it; as students, those in my classes may equally expect it. They might show this by, at first, not really responding to more genuine questions; they might hardly recognize them as questions if they come from learning contexts where teachers typically did not pose challenging questions. This isn't just unconscious thought in action, nor is it just the enactment of memory, according to Davis and Sumara; it is more embedded than that. We do what we each expect, and call forth emotions and reactions in each other by doing it.

#### **4.4. Going beyond “what works”**

Deborah Britzman (1991) wrote movingly about teaching, and learning to be a teacher, in the world of pre-service K-12 teachers.

The image of teaching advocated here is dialogic: teaching must be situated in relationship to one's biography, present circumstances, deep commitments, affective investments, social contexts, and conflicting discourses about what it means to learn to become a teacher. With this dialogic understanding, teaching can be reconceptualised as a struggle for voice and discursive practices amid a cacophony of past and present voices, lived experiences, and available practices. The tensions among what had preceded, what is confronted, and what one desires shape the contradictory realities of learning to teach.

Learning to teach is a social process of negotiation rather than an individual problem of behaviour. (1991, p. 8)

What would instructional development for university faculty look like if those engaged in it viewed teaching as a social process in this way, and worked with their faculty colleagues to help bring about opportunities for professional learning that went beyond simply determining “what works,” in an instructional development session or ultimately in the faculty member's classroom? With this focus on an expanded landscape

for dialogue beyond the simplicity of available practices, it seems that there are more openings for what Patti Lather (1999) calls research with catalytic validity – research and practice that actually, in our case, make a difference in the lives of university teachers and students.

#### **4.4.1. Exploring options for faculty learning**

Angela Pickering (2005 – initiative #69) noted the problems of narrowness in evaluation-focused research as well as in practice based on her perceptions as a participant/researcher in a year-long faculty development program for new lecturers in the UK.

By focusing on outcome in relation to one particular influence for change (such as the development programme) an important aspect of professional learning is sidelined. If it is accepted that professional learning is 'situated' (Lave, 1993) and that universities are culturally complex organizations (Sackman, 1997) with a variety of departmental and institutional teaching cultures (Knight & Trowler, 2000) then any attempt to understand the effect of a development program must situate this type of learning in relation to a complex array of influences for change. Encounters with colleagues, students and university systems and day-to-day stresses and pressures will all have a role to play. Driving metaphorical 'wedges' (Rowland, 2001) between elements of the lecturer's world by focusing on specific influences for change (for example a development intervention) does not reflect a context in which experiences are inter-dependent, and in which teaching development interventions are only part of the 'puzzle' of being a university lecturer. (p. 305)

Pickering's sense of a world of professional learning beyond formal learning opportunities calls to mind Webster-Wright's (2009) case for abandoning the phrase "professional development" in favour of "professional learning," which she feels more clearly embodies the variety of ways in which learning is situated for professionals. Others agree on the need for a changed approach. Like Webster-Wright, Wilson (2000) argues that continuing professional education must move beyond merely updating competency, and promote learning from practice. For Wilson this is in part a political argument; he feels there have been consistent losses in professional autonomy in recent years, and while he does not identify post-secondary education and its professors specifically in his discussion, his writing is reminiscent of Barnett's (1994) contention that operational/instrumental views on faculty training have become a strong influence in the

academy. Such views call into question the role of the university, and make simple skills-based training for teaching seem anything but uncomplicated.

Following Webster-Wright (2009), in the next sections consideration is given to faculty learning, and ways of thinking about faculty learning that draw on the complexity and situated nature of the process of learning to teach. Some of these approaches have been used in some places. None were reported in such a way that they could be included in this study. Four ideas will be considered: research participation as a way of learning, departmentally-centred initiatives, appreciative inquiry, and consideration of the faculty member as an adult learner. These possible approaches and locations of instructional development are not presented as a way to “fix” the field. Rather, they are positioned as a reminder that just as there are multiple ways of teaching effectively in the university, there are multiple ways of learning to teach and of assisting others who are striving to enhance their teaching.

#### **4.4.1.1. Research participation and professional learning**

In the process of identifying studies to be included in this meta-study, a small category of literature was identified that, while it did not specifically report on an instructional development initiative, did report on faculty learning happening as a result of participating in research. This type of research includes scholarship of teaching initiatives (Kreber 2002), but is not limited to them. For example, Cranton and Carusetta (2004; 2005) conducted a three-year study of the development of authenticity in university faculty members approaches to teaching. They used grounded theory to examine interview results and to identify dimensions of authenticity in teaching. The process of research included classroom observation, focus groups and twice-yearly interviews with participants. Although their intention was to examine the experience of individual teachers, something that they see as necessary to a more useful common generic approach to professional development for teaching in higher education, the research process itself seemed to lead participants to a habit of reflection and perhaps a more sophisticated conception of teaching than they would have developed without participating in the research. Thus the process of research participation could be seen as a type of professional learning.

Clegg (2003) argues for integration of research and teaching practice in continuing professional development for university faculty, suggesting that this would help break down the perceived divide between teaching and learning, and that:

At the very least, it would not invite academics to leave aspects of their identity at the door when they become engaged in thinking about their practice as teachers, and not involve leaving teaching identities behind when engaging in scholarship and research. (p. 46)

Research studies like Cranton and Carusetta's (2004, 2005) could provide this kind of integrated opportunity for faculty, while simultaneously providing a more nuanced understanding of the process of becoming a teacher in higher education.

#### **4.4.1.2. Departmentally-centred faculty learning**

Knight et al. studied 33 part-time teachers working for the Open University in the UK, and concluded on the basis of their description of learning to teach in higher education that they had largely learned to teach through interactions with their colleagues, and through reflection on their own past experiences as students, although to some extent they had also participated in formal educational professional development (Knight et al. 2007). The authors characterize this as essentially an ecological process "in the sense that it is evoked by engagements with other colleagues and the 'lived' workplace environment" (p. 431). Their recommendations for those strategizing professional development for faculty accordingly involve working with the environment, rather than with the individual faculty members alone. They note: "Change is evoked by influencing both the ways in which people connect with one another and the opportunities for change, that is, the resources and opportunities that are at hand" (p. 431). While not discounting the importance of formal learning, Knight and his colleagues stress, particularly for new faculty, the importance of learning to teach within a department, in a situation where the workplace values the new faculty members' expertise and where a contribution is anticipated. The result, they suggest, is to bridge the gap between formal and non-formal learning, and base the development process on the idea of a professional apprenticeship. Both Clegg (2003) and d'Eon et al. (2000) provide arguments in support of this idea, Clegg in underscoring the importance of an approach to professional development that recognizes the necessary integration of multiple faculty roles, and d'Eon et al. in the contention that teaching is essentially a

social practice, rather than the practice of a craft or the technical application of skills. The integration occurs, and the practice is enacted, within academic departments.

Situating faculty development within departments seems valuable, but it is not without its problems. Coffey and Gibbs (2004) reported in their study of initial training of new university faculty at several universities, faculty members themselves may find that not all departments support new approaches to teaching and learning. They report that program participants do not necessarily find that their own departments particularly supportive of innovations in teaching approaches:

On the training programmes teaching was seen to be valued and the improvement of teaching encouraged. Innovation and change were supported and openly discussed. In contrast trainees reported that in their departments teaching was often not valued and that there was pressure to conform to largely teacher-focused teaching conventions (such as didactic lecturing and testing of acquisition of subject content). Change was sometimes frowned upon and taken to imply criticism of more experienced colleagues. The training programme provided a kind of 'alternative culture' that counter-balanced the negative influences of the culture of teachers' departments. (p. 98)

This observation may be accurate in some cases; it is not necessarily the case, though, that the perceptions of those reporting the experience are an accurate reflection of the intentions of others in the department. A department, like any other workplace location, is a site of human interaction; it is not reasonable to expect that all experiences in departments would be the same, nor that all new teaching ideas would be met with enthusiasm (or lack of enthusiasm, for that matter). Reactions will vary depending on the individuals involved, the way in which the new approach is suggested and many other factors. Gibbs and Coffey's point, though, is a valid one: the influence of a teaching department will be significant in the adoption or refusal to adopt changes in teaching approach, and no matter where the instructional development initiative occurs.

#### **4.4.1.3. Appreciative Inquiry**

Appreciative Inquiry is a process used most frequently for organizational development. It originated in the 1980s, and is designed to acknowledge the sense of its founders that, in doing organizational development, they tended to find most of what they looked for. Appreciative Inquiry focuses on the power of what the founders, David Cooperrider and Suresh Srivastva, call the "generative potential of positive images"

(Yballe and Oconnor, 2000, p. 475): a search for what is effective and positive, rather than a search for problems and things that are not working. Considered as an approach to professional learning, Appreciative Inquiry could have particular value in encouraging peer-to-peer learning that is firmly situated in the location of practice. The process involves collective sharing of positive experiences, the collective identification of success factors, and the envisioning of new directions for a group or department based on the successes they have already experienced. Davis (2005) reports in a preliminary way on an appreciative inquiry process conducted at Baker College in Michigan. The goal of the project was to develop a quality improvement initiative for developmental education (a department that helped academically unprepared students attain the necessary prerequisites for college programs), and through the process a design document outlining ground rules for everything from student admission to assessment was developed.

This process has not been extensively applied in faculty development, or at least the outcomes have not been documented. However, the process does hold some interesting potential to address some of the problems identified in research and practice, for three reasons:

- It is based in the participants' own experience and context.
- It is based on the idea that participants bring expertise to the process of ongoing professional learning, and that they are able to identify what is currently effective.
- It positions the facilitator of the sessions as a facilitator, rather than as the expert dispenser of knowledge.

In an instructional development setting, it is possible to imagine several ways the process could be applied. At its most basic level, Appreciative Inquiry asks participants to identify the things that are working in the situation, and those that they want more of. Here one can imagine, as an example, a group of instructors, or instructors working with students, identifying aspects of a course or broader curriculum that were found to be especially effective for student learning. Working together, participants might then explore these successful aspects of teaching and learning, coming to agreement about why a particular approach or technique was successful. Once these underlying reasons for success were identified, the next step would be to collectively identify ways in which

the success could be built on – to answer the question, “If this is what we want more of, how do we get it?” The responses to this could conceivably range from curriculum redesign to skills-based instructional development sessions in specific techniques to a decision that nothing further needed to be done; a significant aspect of the Appreciative Inquiry process is collective planning and decision-making, and thus next steps could not be identified in advance of the process. Opening up instructional development practice to more of this kind of collaborative approach could have two benefits: first, it would ensure genuine identification of the participants’ needs, and second, it would ensure that instructional development was embedded in the participants’ context.

#### **4.4.1.4. The faculty member as adult learner**

The principles identified with adult education would seem to be one reasonable framework for instructional development. Based on work done by Malcolm Knowles, mostly in the 1960s, and expanded on by Stephen Brookfield and others, they are a series of almost common-sense ideas that, it is felt, should underlie the design of learning programs for adults. Knowles maintained that:

- adults need to know why they are learning something
- adults learn through experience
- adults are problem-solvers, and learn through solving problems
- adults learn best when what they are learning is of immediate use

For Knowles these observations led to several guidelines for the development of educational programs for adults, including an emphasis on needs assessment and meeting participants’ needs. Knowles (1980, 1990), Brookfield (1987, 1995), Merriam, Caffarella and Baumgartner (2007) and many others have expanded upon these basic ideas of ‘andragogy’, as Knowles termed his description of the ideal learning approach for adults.

These basic ideas are not always well addressed in the design of instructional development initiatives. Many initiatives are, as Sharp and McLaughlin (1997) describe, centrally developed and assumed to be applicable in most if not all teaching situations. Many do not include an opportunity for participants to identify problems or challenges in their own teaching practice, and determine if the proposed approach would be useful in resolving the problem. Some initiatives take a rigid view of knowledge, presenting

seemingly context-free suggestions for improved teaching without consideration of participants' own experience. Many are focused not on problem-solving in real situations, but on developing understanding of approaches that are assumed to solve problems wherever they occur. Efforts to improve practice in the field could perhaps begin here, with a more rigorous focus on needs assessment and, in published research studies, reporting of needs assessments when they have been done.

Introduction of the principles of adult learning into instructional development practice is not a panacea, of course. It is a reality of professional development in all fields that while the perceived needs of participants in learning experiences are significant, they are not the only driving factor. Instructional development initiatives are designed for many and varying reasons, including in response to the introduction of new procedures and in attempts to ensure uniform responses in evaluation of student performance. Needs assessments that recognize the complexity of the circumstances as well as the perceptions of participants can be useful, but must be done in a way that recognizes organizational as well as individual needs.

## **4.5. Conclusion**

The goals of this meta-study were to answer the research question: “What is known about the relationship between instructional development initiatives and effective teaching,” and to explore the field of instructional development, outlining its strengths and weaknesses and suggesting new directions for the future.

The primary research question cannot easily be answered based on the current instructional development practice literature. Since the research I reviewed seems to be based on narrow research questions, and focused on individual change in teachers as an outcome, what we know is mainly that a wide variety of approaches may lead to some change on an individual level – hardly an earthshaking conclusion. Since research in this field is rarely tied to explicit definitions of what constitutes “effective teaching,” we in fact know very little about the connection between instructional development initiatives and improvements in university teaching. Further, we cannot state any definitive conclusions about the impact instructional development initiatives have on those who are learning to teach – that is, what happens as a result of the instructional development

initiative that would not have happened anyway, through the process of becoming experienced in the teaching role.

For me, the more significant contributions from this meta-study are the conclusions I have drawn from my consideration of the field as a whole. I believe that with development of the field as I have outlined in this chapter, it would be possible to answer the primary research question posed by this meta-study. But before the question can be answered, many other questions must be widely discussed. Some of these are almost philosophical in nature – questions like, “What constitutes effective teaching in a university?” Others are more specifically related to instructional development practice – questions like, “How can organized instructional development initiatives best support teachers at various phases of their career and in various disciplines? – or “Are there other, better means, of supporting the development of effective university teachers?” To answer these questions will require deep understanding of the process of learning to teach, situated as it is in multiple contexts within universities and within the complex lives and careers of university faculty.

## Appendix A: Studies included in this meta-study

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- Steinert, Y., Cruess, S., Cruess, R., & Snell, L. (2005). Faculty development for teaching and evaluating professionalism: From programme design to curriculum change (goes with Steinert et al. 2007, listed immediately above). *Medical Education, 39(2)*, 127-136.
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- Wong, J. G., & Agisheva, K. (2007). Developing teaching skills for medical educators in Russia: A cross-cultural faculty development project. *Medical Education, 41(3)*, 318-324.

## Appendix B: Summaries and levels of evaluation

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
3	Amin, Z., Khoo H.E., Gwee, M., Tan C.H., & Koh D.R. (2006). Addressing the needs and priorities of medical teachers through a collaborative intensive faculty development programme. <i>Medical Teacher</i> , 28(1), 85-88.	Experienced medical faculty rated their abilities in nine educational areas more highly following a three-day intensive workshop.	Level 1	Level 2B
7	Baroffio, A., Nendaz, M. R., Perrier, A., Layat, C., Vermeulen, B., & Vu, N. V. (2006). Effect of teaching context and tutor workshop on tutorial skills. <i>Medical Teacher</i> , 28(4), 112-119.	Problem-based learning tutors rated their abilities to guide student learning, and their knowledge of specific content, more highly following a three-hour workshop focused half on content and half on group facilitation; students rated tutors who had attended the workshops more highly the year following the workshop than they had before the workshop.	Level 3	Level 3
8	Bernacchio, C., Ross, F., Washburn, K. R., Whitney, J., & Wood, D. R. (2007). Faculty collaboration to improve equity, access, and inclusion in higher education. <i>Equity and Excellence in Education</i> , 40(1), 56-66.	Five colleagues met monthly for eighteen months in two-hour sessions, reviewing their curriculum with the intention of making it more inclusive and democratic; they articulated a theory of action based on educational equity, inclusion, flexibility and access, and experienced tensions regarding both their own learning community and teaching itself.	Cannot be categorized; reports changes to syllabus but no other observed changes in teaching	Level 3
18	Cowan, J., & Westwood, J. (2006). Collaborative and reflective professional development: A pilot. <i>Active Learning in Higher Education</i> , 7(1), 63-71.	Seven university teachers concluded that they experienced significant professional and personal development from participating in a journalling project, with one experienced journaler giving facilitative feedback to the other six.	Level 1	Level 3
20	Dalrymple, K. R., Wuenschell, C., & Shuler, C. F. (2006). Development and implementation of a comprehensive faculty development program in PBL core skills. <i>Journal of Dental Education</i> , 70(9), 948-955.	Dentistry faculty were certified as ready to lead PBL small groups once they attended four workshops in aspects of PBL (student learning, the facilitator role, qualitative assessment and facilitation of learning in clinical training); over 70% of the faculty were successfully certified during this project.	Cannot be categorized: reports attendance for certification	Cannot be categorized: reports attendance for certification
21	Eisen, A., & Bartlett, P. (2006). The Piedmont project: Fostering faculty	More than 100 courses focused on sustainability have been developed at	Cannot be categorized:	Level 4A

<sup>28</sup> Levinson-Rose & Menges, 1981; Steinert et al., 2006.

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
	development toward sustainability. <i>Journal of Environmental Education</i> , 38(1), 25-36.	Emory U and the principles of sustainability have become part of the university's strategic plan based on the Piedmont Project. In this year-long initiative, faculty attend two days of seminars, develop courses independently, go on a field trip and finally attend a dinner debrief at the end of the year.	reports development of new courses	
24	Gallos, M.R., van den Berg, E. & Treagust, D. (2005). The effect of integrated course and faculty development: Experiences of a university chemistry department in the Philippines. <i>International Journal of Science Education</i> , 27(8), 985-1006.	Nine of 14 participating instructors were able to improve instruction in a revised introduction to chemistry class in the Phillipines, using instructional techniques based on Rosenshine's model of direct instruction (mini-plenaries followed by seatwork and concluded with a summary); faculty members learned the new approach by observing the course author teaching, then doing it themselves with coaching.	Level 3	Level 3
25	Garcia, L. M., & Roblin, N. P. (2008). Innovation, research and professional development in higher education: Learning from our own experience. <i>Teaching and Teacher Education: An International Journal of Research and Studies</i> , 24(1), 104-116.	An action research project with the preliminary aim of integrating education courses and encouraging critical thinking among students challenged the eight professors involved to rethink their views of teaching and learning.	Level 1	Level 3
29	Hatem, D. S., Barrett, S. V., Hewson, M., Steele, D., Purwono, U., & Smith, R. (2007). Teaching the medical interview: Methods and key learning issues in a faculty development course. <i>Journal of General Internal Medicine</i> , 22(12), 1718-1724.	After a five-day course entitled, "Teaching the medical interview," and including foci on communication and self-awareness, 79 course participants reported greater confidence in self-awareness and teaching skills.	Level 1	Level 2A, 2B
30	Hatzipanagos, S., & Lygo-Baker, S. (2006). Teaching observations: Promoting development through critical reflection. <i>Journal of Further and Higher Education</i> , 30(4), 421-431.	University lecturers participating in developmental programs for teaching found observation by educational developers to be supportive, developmental and non-intimidating, encouraging critical reflection and providing useful feedback.	Cannot be categorized: study is of response to the initiative, not changes in teaching	Cannot be categorized: study is of response to the initiative, not changes in teaching
31	Herrmann, M., Lichte, T., Von Unger, H., Gulich, M., Waechter, H., Donner-Banzhoff, N., et al. (2007). Faculty development in general practice in Germany: Experiences, evaluations, perspectives. <i>Medical Teacher</i> ,	Sixteen German general practitioners (MDs), all teaching at universities, mostly felt that attending five weekend sessions in teaching and communication, medical care in practice, quality assurance, research and professionalization of general	Cannot be categorized: study is of response to the initiative, not changes in teaching	Cannot be categorized: study is of response to the initiative, not changes in teaching

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
	29(2), 219-224.	practice in academia helped them meet their personal goals for improvements in teaching and research.		
43	Kumagai, A. K., White, C. B., Ross, P. T., Purkiss, J. A., O'neal, C. M., & Steiger, J. A. (2007). Use of interactive theater for faculty development in multicultural medical education. <i>Medical Teacher</i> , 29(4), 335-340.	After two groups of 15 med school faculty attended 3.5 hour sessions on facilitating difficult small-group situations, most felt their awareness of the importance of cultural identity and sensitivity to group dynamics had improved; the workshops involved theatre presentations (based on Boal) that were modified based on participant input.	Level 1	Level 3
48	Light, G., & Calkins, S. (2008). The experience of faculty development: Patterns of variation in conceptions of teaching. <i>International Journal for Academic Development</i> , 13(1), 27-40.	Faculty (two groups of 12 and 16) participated in a voluntary eight-month program of reflection on teaching; 14 of the 22 who were interviewed modified their conception of teaching to a more complex conception, based on Ramsden's ideas of level 1, 2 and 3 approaches to teaching.	Level 1	Level 2A
50	Lynd-Balta, E., Erklenz-Watts, M., Freeman, C., & Westbay, T. D. (2006). Professional development using an interdisciplinary learning circle: Linking pedagogical theory to practice. <i>Journal of College Science Teaching</i> , 35(4), 18-24.	Eight faculty members (seven in sciences, one in education) improved their course planning ability and focus on student critical thinking through monthly three-hour discussions focused on educational theory, strongly connected to their own course planning.	Level 3	Level 3
51	MacDonald, I. (2001). The teaching community: Recreating university teaching. <i>Teaching in Higher Education</i> , 6(2), 153-167.	Engineering professors and instructors at all levels worked cooperatively to revise the engineering curriculum to focus on what they identified as the most important components for students to learn, eliminate unnecessary content and develop new ways to teach core concepts.	Level 3	Level 4B
54	Manwell, L. B., & Pfeifer, J. (2006). An interdisciplinary faculty development model for the prevention and treatment of alcohol use disorders. <i>Alcoholism: Clinical &amp; Experimental Research</i> , 30(8), 1393-1399.	After a two-day series of workshops (days separated by six months) designed to raise awareness of alcohol and its effect on health, many of the 150 medical/allied health faculty participating had presented workshops themselves (40%), added course content, or improved in interventions with patients whose health was endangered by alcohol use (as judged by simulated interviews).	Level 3	Level 3

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
55	Matthew-Maich, N., Mines, C., Brown, B., Lunyk-Child, O., Carpio, B., Drummond-Young, M., et al. (2007). Evolving as nurse educators in problem-based learning through a community of faculty development. <i>Journal of Professional Nursing, 23</i> (2), 75-82.	After attending a five-day joint faculty development sessions on PBL, faculty from one university and two colleges participated in a focus group and several themes emerged: they had become more confident of their skills, developed a sense of community between the three sites, and come to value both PBL and faculty development opportunities more highly.	Level 1	Level 2A, 2B
57	McLeod, P. J., Brawer, J., Steinert, Y., Chalk, C., & McLeod, A. (2008). A pilot study designed to acquaint medical educators with basic pedagogic principles. <i>Medical Teacher, 30</i> (1), 92-93.	Ten experienced medical school faculty improved their knowledge of pedagogy: identified lack of prep for teaching, appreciation for theory-based intervention, surprise at learning pedagogic theory existed, satisfaction with changes to their teaching based on pedagogic principles, concern about time constraints for more learning and recognition need for booster sessions following a three-hour workshop designed to teach pedagogic principles.	Level 1	Level 2B
58	McShannon, J., Hynes, P., Nirmalakhandan, N., Venkataramana, G., Ricketts, C., Ulery, A., et al. (2006). Gaining retention and achievement for students program: A faculty development program. <i>Journal of Professional Issues in Engineering Education and Practice, 132</i> (3), 204-208.	Both student retention and average student grades in engineering improved following faculty participation in the GRASP project; observers in the classroom encourage faculty to use a variety of teaching approaches to involve students, based on student learning styles.	Level 5	Level 4B
59	Meskill, C., & Anthony, N. (2007). Learning to orchestrate online instructional conversations: A case of faculty development for foreign language educators. <i>Computer Assisted Language Learning, 20</i> (1), 5-19.	Two groups of foreign language faculty (6/13) participated in an online course in teaching with instructional conversations; based on their experience they found overall that computer-mediated communication can be useful for foreign language teaching.	Level 1	Level 2A
65	Notzer, N., & Abramovitz, R. (2008). Can brief workshops improve clinical instruction? <i>Medical Education, 42</i> (2), 152-156.	Students rated clinical instructors' skills more highly in the terms after they attended an eight-hour workshop on student-centred education, in particular their availability to students; ratings were contrasted with same faculty members prior to the workshop and other similar faculty members who had not attended the workshop.	Level 3	Level 3
66	Ottolini, M. C., Cuzzi, S., Tender, J., Coddington, D. A., Focht, C.,	Seven faculty members' ratings of videotaped student case presentations	Level 3	Level 3

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
	Patel, K. M., et al. (2007). Decreasing variability in faculty ratings of student case presentations: A faculty development intervention focusing on reflective practice. <i>Teaching and Learning in Medicine</i> , 19(3), 239-243.	became more congruent (between comments made and marks given) and less varied (between faculty) after a one-hour intervention where the meaning of ratings was explored through discussion.		
67	Peel, D. (2005). Peer observation as a transformatory tool? <i>Teaching in Higher Education</i> , 10(4), 489-504.	The author reflects on her experience of Peer Observation of Teaching (POT) during the completion of a required master's-level credential in higher education; she concludes it was her own reflection on the meaning of the POTS process, rather than the process itself, that was transformative.	Cannot be categorized: focus is on developing a conceptual framework for understanding peer observation of teaching	Cannot be categorized: focus is on developing a conceptual framework for understanding peer observation of teaching
69	Pickering, A. M. (2006). Learning about university teaching: Reflections on a research study investigating influences for change. <i>Teaching in Higher Education</i> , 11(3), 319-335.	This research study follows four novice university lecturers who participated in a one year teaching development program. The study concludes that the program itself was of limited importance in changing lecturers' beliefs, particularly compared with the significance of encounters with students and peers.	Level 1	Level 1
71	Pololi, L. H., & Frankel, R. M. (2005). Humanising medical education through faculty development: Linking self-awareness and teaching skills. <i>Medical Education</i> , 39(2), 154-162.	Medical school faculty developed self-awareness, increased their enthusiasm for and mastery of teaching, and built relationships with each other in a year-long program focused on learner-centred teaching skills.	Level 1	Level 2A, 2B
73	Regan-Smith, M., Hirschmann, K., & Iobst, W. (2007). Direct observation of faculty with feedback: An effective means of improving patient-centered and learner-centered teaching skills. <i>Teaching and Learning in Medicine</i> , 19(3), 278-286.	Following formal observation of clinical teaching by medical school observers of 37 faculty members, observers noted that faculty who had been observed more than once needed improvement in fewer demonstrable areas of learner-centred teaching than colleagues who had not been observed, and that most observed faculty received higher ratings on teaching skills from students.	Cannot be categorized: student ratings	Cannot be categorized: student ratings
74	Rosenbaum, M. E., Lench, S., & Ferguson, K. J. (2005). Outcomes of a teaching scholars program to promote leadership in faculty development. <i>Teaching and Learning in Medicine</i> , 17(3), 247-	Twenty-four faculty members who participated in a three-year Teaching Scholars Program increased their involvement in faculty development (offering workshops etc), increased publications related to education and	Cannot be categorized: change in behaviours/ increased participation	Level 3

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
	253.	took on more educational leadership roles (committees etc.); college-wide faculty development and departmental involvement also increased in the same time period.	in university life	
75	Schuerholz-Lehr, S., Caws, C., Van Gyn, G., & Preece, A. (2007). Internationalizing the higher education curriculum: An emerging model for transforming faculty perspectives. <i>Canadian Journal of Higher Education</i> , 37(1), 67-94.	Participants in a four-day course redesign workshop aimed at internationalizing the curriculum found their awareness and willingness to internationalize increased, and that as this happened they identified contradictions between their desire to include international perspectives and the tendency towards insularity in their lives and disciplines.	Level 1	Level 3
77	Shih, M., & Sorcinelli, M. D. (2007). Technology as a catalyst for senior faculty development. <i>Journal of Faculty Development</i> , 21(1), 23-31.	Forty faculty members who participated in a one-year program for senior faculty learning to incorporate technology, reported success in: increased technological competency, increased teaching skills, increased professional development (collegial contacts, plus renewed enthusiasm), increased university citizenship and, at least based on grades, increased student learning.	Level 3	Level 3 (evidence provided); Level 4B (anecdotal evidence)
	Steinert, Y., Cruess, R. L., Cruess, S. R., Boudreau, J. D., & Fuks, A. (2007). Faculty development as an instrument of change: A case study on teaching professionalism (goes with #83). <i>Academic Medicine: Journal of the Association of American Medical Colleges</i> , 82(11), 1057-1064.	Initiative summarized with reference 83.	See 83 (same initiative)	See 83 (same initiative)
83	Steinert, Y., Cruess, S., Cruess, R., & Snell, L. (2005). Faculty development for teaching and evaluating professionalism: From programme design to curriculum change. <i>Medical Education</i> , 39(2), 127-136.	A faculty-wide initiative to promote teaching of professionalism at McGill school of medicine led to changes at the individual level (instructors incorporated professionalism), the program level (since professionalism was incorporated formally into courses) and at the system level (since a common definition was adopted, and dissemination of ideas encouraged).	Level 1	Level 4A
86	Stevenson, C. B., Duran, R. L., Barrett, K. A., & Colarulli, G. C. (2005). Fostering faculty collaboration in learning communities: A developmental	Faculty preparing to work collaboratively in a First Year Interest Group integrated program participated in five workshops on collaboration, identification of common outcomes,	Level 1	Level 1

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
	approach. <i>Innovative Higher Education</i> , 30(1), 23-36.	technology use and assessment; in followup focus groups 22 faculty found the workshops valuable, promoting both collaboration and student learning.		
89	Villar, L. M., & Alegre, O. M. (2007). Measuring the learning of university teachers following online staff development courses: A Spanish case study. <i>International Journal of Training and Development</i> , 11(3), 200-213.	Following an 11-week, online program aimed at teaching curriculum and teaching skills, 24 faculty members felt that the course provided was useful and that the learning activities provided helped them understand the content.	Level 4	Level 2B
90	Villar, L. M., & Alegre, O. M. (2007). The online faculty development and assessment system. <i>ALT-J Research in Learning Technology</i> , 15(3), 217-230.	161 faculty at five Spanish universities found an online course in curriculum and teaching capacity useful: the course, according to developers, helped them enhance their professional practice.	Level 2	Level 2B
93	Wong, J. G., & Agisheva, K. (2007). Developing teaching skills for medical educators in Russia: A cross-cultural faculty development project. <i>Medical Education</i> , 41(3), 318-324.	Based on retrospective pre and post-tests, 48 medical school faculty at a university in Russia reported that attending a five-day workshop based on videotaped teaching simulations and reenactments, plus goal-setting related to teaching, helped them to improve their teaching skills.	Cannot be categorized: self report of teaching skill	Level 2B
	Knight, A. M., Carrese, J. A., & Wright, S. M. (2007). Qualitative assessment of the long-term impact of a faculty development programme in teaching skills (see Cole et al. #97 - same study). <i>Medical Education</i> , 41(6), 592-600.	Initiative summarized with reference 97.	Included with 97	Included with 97
	Knight, A. M., Cole, K. A., Kern, D. E., Barker, L. R., Kolodner, K., & Wright, S. M. (2005). Long-term follow-up of a longitudinal faculty development program in teaching skills(see Cole et al. 2004 #97). <i>Journal of General Internal Medicine</i> , 20(8), 721-725.	Initiative summarized with reference 97.	Included with 97	Included with 97
97	Cole, K. A., Barker, L. R., Kolodner, K., Williamson, P., Wright, S. M., & Kern, D. E. (2004). Faculty development in teaching skills: An intensive longitudinal model. <i>Academic Medicine: Journal of the Association of American Medical Colleges</i> , 79(5), 469-480.	Ninety-eight participants in various cohorts of a 9 month, 3.5 hour/week program for teaching improvement, professional skills improvement, self-awareness and self-directed learning improvement rated their teaching skills more highly after the program than they had before.	Cannot be categorized: self report of teaching skills	Level 2B

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
316	Stes, A., Clement, M., & Van Petegem, P. (2007). The effectiveness of a faculty training programme: Long-term and institutional impact. <i>International Journal for Academic Development</i> , 12(2), 99-109.	Two years after a one-year faculty development program aimed at increasing student-centred approaches to teaching, faculty members reported ongoing changes in their teaching behavior and their participation in organizational activities related to teaching.	Level 3	Level 3, 4A
326	Hativa, N. (2000). Becoming a better teacher: A case of changing the pedagogical knowledge and beliefs of law professors. <i>Instructional Science</i> , 28(5-6), 491-523.	Four of the worst teachers at a law school improved after individual consultation aimed at improving their specific weaknesses.	Cannot be categorized: reports student ratings	Level 3
327	Nasmith, L., & Steinert, Y. (2001) The evaluation of a workshop to promote interactive lecturing. <i>Teaching and Learning in Medicine</i> , 13(1), 43-48.	Six months after a four-hour workshop on interactive lecture techniques, participants had given more interactive lectures than a control group of similar instructors.	Level 3	Level 3
329	Pololi, L., Clay, M. C., Lipkin Jr, M., Hewson, M., Kaplan, C., & Frankel, R. M. (2001). Reflections on integrating theories of adult education into a medical school faculty development course. <i>Medical Teacher</i> , 23(3), 276-283.	Participants in a three-day faculty development workshop imbued with adult education theory and focused on student-centred teaching found that the course enhanced reflection, contributed to collegiality and increased their knowledge of student-centred learning.	Level 1	Level 2b
331	Dennick, R. (2003). Long-term retention of teaching skills after attending the teaching improvement project; a longitudinal, self-evaluation study. <i>Medical Teacher</i> , 25(3), 314-318.	Between one and two years after attending a two-day workshop on basic teaching skills, participants felt their teaching skills had improved.	Cannot be categorized: self report of teaching skills	Level 3
332	Quinlan, K. M., & Akerlind, G. S. (2000). Factors affecting departmental peer collaboration for faculty development: Two cases in context. <i>Higher Education</i> , 40(1), 23-52.	Researchers interviewed participants from two peer review of teaching projects, one in a department of history at a public university, the other in a department of mechanical engineering at a private university. Neither had a striking impact on faculty beliefs or practices; both were thought to be valuable early steps.	Level 1	Level 1
333	Gelula, M. H., & Yudkowsky, R. (2003). Using standardised students in faculty development workshops to improve clinical teaching skills. <i>Medical Education</i> , 37(7), 621-629.	Health faculty, including those in nursing, medicine and dentistry, reported positively on a series of three workshops involving videotaped encounters with a standardised student, followed by debriefing with a small group and facilitator.	Level 1	Level 1

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
337	MacKinnon, M. M. (2001). Using observational feedback to promote academic development. <i>International Journal for Academic Development</i> , 6(1), 21-28.	Based on a case study example of a successful consultation designed around a log of classroom activities, guidelines are provided for consultants in their approach to giving feedback to academic staff.	Level 1	Level 2A
338	Piccinin, S., & Moore, J. (2002). The impact of individual consultation on the teaching of younger versus older faculty. <i>International Journal for Academic Development</i> , 7(2), 123-134.	Both old and young faculty members showed improvement in student ratings following consultation with an educational specialist in the Centre for University Teaching; improvement appeared to happen more quickly for younger faculty.	Cannot be categorized: student ratings	Cannot be categorized: student ratings
339	Bahar-Ozvaris, S., Aslan, D., Sahin-Hodoglugil, N., & Sayek, I. (2004). A faculty development program evaluation: From needs assessment to long-term effects of the teaching skills improvement program. <i>Teaching and Learning in Medicine</i> , 16(4), 368-375.	Six months to one year after a five-day teaching skills improvement workshop for faculty in medicine at a university in Turkey, participants reported that they still used the skills introduced in the workshop.	Cannot be categorized: self report of skill change	Level 3
343	Littlejohn, A. H. (2002). Improving continuing professional development in the use of ICT. <i>Journal of Computer Assisted Learning</i> , 18, 166-174.	A review of educational theory plus discussions with five experienced online faculty members identified four main recommendations for online courses; these recommendations were at the heart of a successful four-month seminar for faculty.	Level 1	Level 1
345	Breda, J., Clement, M., & Waeytens, K. (2003). An interactive training programme for beginning faculty: Issues of implementation. <i>International Journal for Academic Development</i> , 8(1/2), 91-104.	An interactive model of faculty development, including discussion of instructional beliefs, use of technology and varying teaching techniques, and evaluation, was completed by 18 participants at a university in Belgium; it was popular and felt to be useful, yet did not appear to modify teaching beliefs.	1	2A
346	Bellows, L., & Danos, J. R. (2003). Transforming instructional development: Online workshops for faculty. <i>To improve the academy: Resources for faculty, instructional, and organizational development</i> , 21, 160-178.	Although only about one third of those enrolling finished this online workshop in learner-centred syllabus constructions, organizers characterized it as successful based on participant response and success in completing their syllabus.	1	1
347	Vanhanen, H., Pitkälä, K., Puolakkainen, P., Strandberg, T. E., & Lonka, K. (2001). The problem-based learning tutorial laboratory - a method for training	At Helsinki U medical school, biomedical science instructors and clinical instructors attended problem-based workshops on problem-based learning; in both cases, participants felt	Cannot be classified: Self report of learning	Level 2B

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
	medical teachers. <i>Medical Teacher</i> , 23(1), 99-101.	they had improved their knowledge of content.		
348	Murray, I., & Savin-Baden, M. (2000). Staff development in problem-based learning. <i>Teaching in Higher Education</i> , 5(1), 107-126.	The authors conclude that a three-day workshop in PBL skills provided staff with knowledge and skills required to develop and facilitate PBL, plus provided them with a forum for discussion of issues of implementation.	Level 1	Level 1
349	Gold, S. (2001). A constructivist approach to online training for online teachers. <i>Journal of Asynchronous Learning Networks</i> , 5(1), 35-57.	Faculty in a variety of educational institutions in the U.S. were more favourably disposed towards online teaching and learning following a two-week online course.	1	2a
350	Clegg, S., Konrad, J., & Tan, J. (2000). Preparing academic staff to use ICTs in support of student learning. <i>International Journal for Academic Development</i> , 5(2), 138-148.	Participants in a course focused on use of ICT in education experienced frustration in the balance between theory and practice, the degree of hands-on practice, and the challenge of managing time to focus on the course.	1	1
353	Crang-Svalenius, E., & Stjernquist, M. (2005). Applying the case method for teaching within the health professions—teaching the teachers. <i>Medical Teacher</i> , 27(6), 489-492.	The majority of medical and nursing school faculty who attended a brief workshop using the case method to introduce the method planned to incorporate case into their own teaching after the session.	Cannot be classified: knowledge by self-report	Level 2B: Knowledge
354	Ho, A., Watkins, D., & Kelly, M. (2001). The conceptual change approach to improving teaching and learning: An evaluation of a Hong Kong staff development programme. <i>Higher Education</i> , 42, 143-169.	Instructors' conceptions of teaching were measured before and after a course, as were their student's views of the instructor and students' approaches to learning. Some instructors did change their conception, and those instructors' student ratings improved as did their students approach to learning.	Level 1	Level 2A
355	Quinn, L. (2003). A theoretical framework for professional development in a South African university. <i>International Journal for Academic Development</i> , 8(1/2), 61-75.	The theoretical framework for a two-year master's for faculty is the basis for reflection in this article; the critically reflective model is felt to be useful, yet challenging for new faculty, some of whom are not very familiar with their own disciplines and who are struggling with the basics of teaching.	Cannot be categorized: evaluation focused on design/enrolment in program, rather than outcomes	Cannot be categorized: evaluation focused on design/enrolment in program, rather than outcomes
359	Wildman, T. M., Hable, M. P., Preston, M. M., & Magliaro, S. G. (2000). Faculty study groups: Solving "good problems" through study, reflection, and collaboration. <i>Innovative Higher Education</i> , 24(4),	An initial pilot program for faculty study groups, involving 42 faculty members in seven groups, was so successful that the groups have become a regular part of programming for faculty development at Virginia Polytechnique.	Level 1	Level 1

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
	247-263.			
360	Schiller, S. A., Taylor, M. M., & Gates, P. S. (2004). Teacher evaluation within a community of truth: Testing the ideas of Parker Palmer. <i>Innovative Higher Education, 28</i> (3), 163-186.	Three colleagues in a department of English implemented and evaluated Parker Palmer's 'open door' approach to evaluation during a single term, finding it both valuable and challenging.	Level 1	Level 2A
361	Hubball, H., Collins, J., & Pratt, D.D. (2005). Enhancing reflective teaching practices: Implications for faculty development programs. <i>The Canadian Journal of Higher Education, 35</i> (3), 57-81.	Faculty members' perspectives on teaching changed in some cases after an eight-month, reflection-based program on teaching and learning in higher education.	Level 1	Level 2A
363	Frost, S. H., & Jean, P. M. (2003). Bridging the disciplines: Interdisciplinary discourse and faculty scholarship. <i>Journal of Higher Education, 74</i> (2), 119-149.	Eighty-five faculty members at Emory University participated in a series of semester-long seminars on broad general topics (ie 'being human') over an eight-year period, and in general found that the participation influenced their teaching, their research and their feelings about the university and their careers.	Cannot be categorized: reports changes in community, including some examples of changes in teaching content/approach	Level 3
364	Wlodarsky, R. (2005). The professoriate: Transforming teaching practices through critical reflection and dialogue. <i>Teaching and Learning, 19</i> (3), 156-172.	Three professors met one-on-one with a researcher, who also observed their classes and facilitated a focus group of the three; although the researcher concludes the project demonstrated increased reflection, there is not much evidence of its impact.	Level 1	Level 3
368	Sandretto, S., Kane, R., & Heath, C. Making the tacit explicit: A teaching intervention programme for early career academics. <i>International Journal for Academic Development, 7</i> (2), 135-145.	Nine of ten early-career science lecturers found a ten -week, two-hour-per-week, Teaching Improvement Program useful in that it encouraged them to consider and articulate their own theory of teaching and ensure they were applying it in practice.	Level 1	Level 2A
373	Asmar, C. (2002). Strategies to enhance learning and teaching in a research-extensive university. <i>International Journal for Academic Development, 7</i> (1), 18-30.	The University of Sydney has undertaken a major change process to make teaching more central to the university's work; preliminary evaluation suggests the initiative, which involves multi-level rewards and recognition for teaching as a scholarly activity, is contributing to positive culture change.	Cannot be categorized: preliminary report on institutional change	Cannot be categorized: preliminary report on institutional change

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
375	Middendorf, J. (2004). Facilitating a faculty learning community using the decoding the disciplines model. <i>New Directions for Teaching and Learning</i> , 98, 95-107.	At the U of Indiana, a structured faculty learning community leads faculty through the "decoding the disciplines" model of thinking about teaching, then involves them in an ongoing association of teaching fellows.	Cannot be categorized: self report of changed behaviour	Level 3
376	Reid, A., & Petocz, P. (2003). Enhancing academic work through the synergy between teaching and research. <i>International Journal for Academic Development</i> , 8(1/2), 105-117.	Research was integrated with teaching in three separate ways in three case studies described in this article: involving new faculty in research and publication on teaching; and involving experienced faculty in studies of students' conceptions of their subjects.	Cannot be categorized: increased focus on research	Level 3
378	Bell, M. (2001). Supported reflective practice: A programme of peer observation and feedback for academic teaching development. <i>International Journal for Academic Development</i> , 6(1), 29-39.	Participants in a teaching improvement program worked with observers they selected from their own departments, who observed their teaching and gave them feedback; most found it useful, and some reported making changes to teaching as a result.	Level 1	Level 3
387	Lanahan, D. C. J., & Steger, J. A. (2000). Rethinking faculty development. <i>Higher Education</i> , 39, 1-18.	A \$1.5 M annual program at the University of Cincinnati was felt by authors to have had broad influence at the university, changing the way the university functions; little evidence is provided for the strength of this impact, however.	Cannot be categorized: review of institutional impact of program funding individual projects	Level 4A
389	Major, C.H. (2002). Problem-based learning in general education at Samford University: A case study changing faculty culture through targeted improvement efforts. <i>The Journal of General Education</i> , 51(4), 235-256.	Problem-based learning was successfully introduced into Samford University's general education courses using a process that involved collaboration between faculty, administrators and students, and which relied on strong administrative support.	Cannot be classified: documents changes in practice at a broad institutional level	Level 4A
393	Mathias, H. (2005). Mentoring on a programme for new university teachers: A partnership in revitalizing and empowering collegiality. <i>International Journal for Academic Development</i> , 10(2), 95-106.	A programme at a British university, pairing new lecturers with experienced mentors from their own departments in a compulsory programme, was found to be reasonably successful and appreciated by mentors and protégés alike.	Cannot be classified: documents experience of program for mentors and protégés rather than outcomes	Cannot be classified: documents experience of program for mentors and protégés rather than outcomes
395	Blackwell, R., Channell, J., & Williams, J. (2001). Teaching circles: A way forward for part-time	This research contrasts the experience of four schools (faculties) in organizing teaching circles for part-time	Cannot be classified: documents	Cannot be classified: documents

ID#	Reference	Summary	Level of Evaluation	
			L-R & M <sup>28</sup>	Steinert et al.
	teachers in higher education? <i>International Journal for Academic Development</i> , 6(1), 40-53.	instructors, and discovers that the only school where the initiative was particularly successful was one where there was already some sense of cohesion among part-time staff, and, more importantly, where staff felt ownership of the initiative.	successes and failures in the introduction of a faculty development program at the institutional level, rather than individual outcomes	successes and failures in the introduction of a faculty development program at the institutional level, rather than individual outcomes
397	Carlson, T., MacDonald, D., Gorely, T., Hanrahan, S., & Burgess-Limerick, R. (2000). Implementing criterion-referenced assessment within a multi-disciplinary university department. <i>Higher Education Research and Development</i> , 19(1), 103-116.	Five faculty members in a department at Queensland University followed an action research/learning process to develop the use of criterion-referenced assessment in their department.	Cannot be classified: change in practice/assessment process	Level 3
402	Romano, J. L., Hoelsing, R., O'Donovan, K., & Weinsheimer, J. E. (2004). Faculty at mid-career: A program to enhance teaching and learning. <i>Innovative Higher Education</i> , 29(1), 21-48.	Self-defined mid-career faculty at the University of Minnesota reported both satisfaction with the program and changes in teaching behaviour after a year-long faculty development program.	Cannot be categorized: self report of changed behaviour	Level 3
925	Blanton, M.L. & Stylianou, D. A. (2009) Interpreting a community of practice perspective in discipline-specific professional development in higher education. <i>Innovative Higher Education</i> 34(2) 79-92.	Peer researchers in a department of mathematics used Lave and Wenger's idea of communities of practice to examine a series of seminars about teaching the concept of mathematical proof.	Cannot be categorized: Observer report of attitude change	Level 2A
927	Irvine, N. & Carmichael, P. (2009). Threshold Concepts: A Point of Focus for Practitioner Research. <i>Innovative Higher Education</i> , 33(4), 239-255.	A multidisciplinary group of peers explored the usefulness of "threshold concepts" for teaching and research in their disciplines.	Cannot be categorized: Participant reflection on knowledge	Level 2B

## Appendix C: References cited in multiple studies

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<b>Cited in 7 studies</b>	
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<b>Cited in 6 studies</b>	
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<sup>29</sup> In some cases, references were cited by the authors in several articles about the same initiative. This was counted as one article citation.

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