Review

Teacher knowledge: What is it? How do we uncover it? What are its implications for schooling?

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Abstract

This paper follows the ways in which publications in TATE, that focus on teacher knowledge, provide insights into the development and growth of scholarly understanding of teacher knowledge. Relevant questions are: How is teacher knowledge defined? What modes of inquiry are adopted by the researchers? What are conceived as the implications of teacher knowledge for schooling? In order to answer these questions, nine papers were chosen from TATE according to the following criteria:

1. distributed over a period of 20 years from 1988 to 2009
2. representing an international group of scholars
3. reflecting modes of inquiry
4. focusing on a variety of themes related to teacher knowledge

These papers were analyzed according to the following aspects:

- Definition of teacher knowledge
- Mode of inquiry
- Emphasis on one or more of the commonplaces of education — subject matter, learner, teacher, milieu (Schwab, 1964)
- Emphasis on one or more of the kinds of teacher knowledge suggested by Shulman (1986)

The analysis of each paper is presented followed by a discussion.

Several tendencies in the development of the concept of teacher knowledge are noted. There is the extension of the term to include societal issues. As well, one finds a growing focus on the personal aspects of knowledge. The role of context in shaping teacher knowledge plays a crucial role in the analyzed papers, reflecting changes in the milieu of schooling. The main mode of inquiry in the analyzed papers is qualitative, interpretative. The authors of the various papers were interested in the concrete experiences and views of student teachers, and teachers, concerning their knowledge and its acquisition. This approach yields important insights but leaves open several questions. First, the curricular question: what concrete opportunities for gaining knowledge are offered to student teachers? Another question concerns the modes of teachers’ use of their professional knowledge. This question requires detailed observations and documentation of teachers’ actions in classrooms, trying to link their knowledge and practice.

The papers analyzed in this review share a common scholarly language and are based in Western culture. It is important to see, as well, studies conducted in other cultures, which might have a different view of teacher knowledge.

1. Introduction

The knowledge of teachers has become a focus of interest to educators and policy makers (Shulman, 1986), attracting the
attention of scholars. Education literature reflects this growing focus. The present paper attempts to follow the ways in which publications in TATE that focus on teacher knowledge, provide insights into the development and growth of scholarly understanding of teacher knowledge. Relevant questions are: How is teacher knowledge defined? What modes of inquiry are adopted by the researchers? What are conceived as the implications of teacher knowledge for schooling? In order to answer these questions I chose nine papers from TATE according to the following criteria:

1. distributed over a period of 20 years from 1988 to 2009
2. representing an international group of scholars
3. reflecting modes of inquiry
4. focusing on a variety of themes related to teacher knowledge

These papers were analyzed according to the following aspects:

Definition of teacher knowledge
Mode of inquiry
Emphasis on one or more of the commonplaces of education (Schwab, 1964) (subject matter, learner, teacher, milieu) — though issues might be interconnected in a study, researchers might choose to focus on one.

Emphasis on one or more of the kinds of teacher knowledge suggested by Shulman (1986): content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners and their characteristics, knowledge of educational contexts, knowledge of educational ends, purposes, and values and their philosophical and historical grounds (Shulman, 1986, p. 8)

Suggested implication for teacher education, by the authors themselves, or implied through their study

The analytic comparison of papers dealing with a common theme in one scholarly journal has the following advantages:

- a journal has the potential to develop a philosophy and conceptual framework related to the themes treated in it
- contributors in a journal might develop dialogues among them, thus promoting knowledge growth in the field

2. Structure of paper

We turn now to an analysis of each of the selected papers in chronological order, followed by a discussion. The analysis is based on my perceptions and understanding. Different modes of analysis might obviously yield different insights. The discussion highlights the development of the understanding of the theme of teacher knowledge over time, connecting this development to changes in the milieu of schooling.

3. Analysis of papers


This study focuses on identifying the characteristics of the necessary knowledge needed for those involved in teaching. The researchers define teacher knowledge as follows: “a body of professional knowledge that encompasses both knowledge of general pedagogical principles and skills and knowledge of the subject matter to be taught” (p. 54).

Subject matter itself, the focus of their study, is viewed in Schwab’s (1964) terms

In addition to content knowledge, subject matter knowledge encompasses an understanding of the various ways a discipline can be organized or understood, as well as the knowledge of the ways by which a discipline evaluates and accepts new knowledge, which Schwab termed syntactic knowledge (p. 54).

Yet, this complex understanding of subject matter is not conceived to be enough for teachers. What is needed is a specialized body of knowledge: “pedagogical content knowledge” (Shulman, 1986). One of the primary concerns of teachers involves coming to terms with what it means to teach their particular subject matter (p. 54).

This study is part of a larger study on “Knowledge Growth in a Profession.” The researchers analyzed interviews and observational data of six student teachers, who were followed into their classrooms, their planning and teaching. The participants were interviewed about their professional preparation, the sources of their knowledge and beliefs about teaching:

Whether they attempted to learn new material or to deepen their understanding of familiar topics, the teachers in our study attributed significant growth in their subject matter knowledge to the demands of teaching (p. 60).

The authors found that:

Occasionally, the prospective teachers’ won mastery of a subject blinded them to potential student difficulties. Actual contact with students forced them to re-examine their subject matter content form a new perspective. They learned to evaluate their subject matter from the perspective of students. (p. 59).

This new perspective of subject matter knowledge for teaching has far reaching consequences for teacher education programs. The claim is made that:

As we conceptualize what it is that teachers need to know, special attention needs to be paid to if, where, and how that knowledge base should be addressed in the pre-service curriculum (p. 61).

Teachers’ knowledge base, as far as subject matter knowledge is concerned, has to include opportunities for re-examining subject matter content from the perspective of student learning, in Shulman’s terms, “pedagogic content knowledge.”


Tamir’s paper also addresses subject matter and the knowledge needed for teaching it.

Tamir bases his insights on an example of teaching the design and use of practical tests in previous studies (Tamir, Nussinovitz, & Friedler, 1982). Though Tamir’s paper is dated earlier than the following one, it clearly relies on the work of Connelly and Clandinin (1988) Tamir elaborates the concept of teacher knowledge and suggests the distinction between professional and personal knowledge of teachers. He defines “professional knowledge” as follows: “By professional knowledge we commonly refer to that body of knowledge and skills which is needed in order to function successfully in a particular profession” (p. 263). In the special case of the teaching profession, this knowledge is both general and personal-experiential. Personal knowledge of teachers is viewed by Tamir in terms used by Connelly and Clandinin (1988):
Personal practical knowledge ‘is a term designed to capture the idea of experience in a way that allows us to talk about teachers as knowledgeable and knowing persons…Knowledge is not found only ‘in the mind’, it is ‘in the body’. And it is seen and found ‘in our practices’ (Connelly & Clandinin, 1988, p. 25)

Tamir concludes that

the actual behavior of a person in his or her professional field is a result of interaction between professional and personal knowledge (p. 265).

Though relating to the teaching of subject matter, the commonplace focus of Tamir is on the “teacher”, his or her knowledge as classroom teacher or as teacher educator. Adapting Shulman’s terms of pedagogical content knowledge, Tamir suggests that teacher educators possess a unique kind of knowledge — “personal — professional”. He coins the phrase “teacher education pedagogical knowledge”. This kind of knowledge is to be demonstrated in the teaching of teacher educators through concrete experiences, which are an “effective way of communicating and modeling a useful teaching strategy to novice teachers” (p. 267).

Tamir tries to integrate a general definition of knowledge in the professions with a view that honors personal experiences and knowledge gained in practice in teaching. He exemplifies how this complex kind of knowledge might be demonstrated in teacher education programs.


According to Connelly, Clandinin and He, “teacher knowledge research is part of a revolution in how educators think about classroom practice” (p. 666). This revolution is based on the assumption that “the most important area is what teachers know and how their knowing is expressed in teaching” (p. 665). Their focus is on personal-practical knowledge:

For us, personal practical knowledge is: a term designed to capture the idea of experience in a way that allows us to talk about teachers as knowledgeable and knowing persons. Personal practical knowledge is in the teacher’s past experience, in the teacher’s present mind and body, and in the future plans and actions. Personal practical knowledge is found in the teacher’s practice. It is, for any one teacher, a particular way of reconstructing the past and the intentions of the future to deal with the exigencies of a present situation (Connelly & Clandinin, 1988, p. 25)

In other words, teachers carry in themselves the knowledge required for teaching: this is the nature of the revolution in how we think about classroom practice. Teachers do not apply subject matter knowledge; they create their personal-practical knowledge of teaching.

The methodology adopted by Connelly et al. is qualitative-participatory, with researchers fulfilling roles in the study as partners with practitioners. Data collection involves field notes, interviews, conversations, journals, autobiographies, personal artifacts, oral history, annals, and letters. Important terms for the analysis of the collected materials are “image, rules, practical principles, personal philosophy, metaphor, cycles, rhythms and narrative unities” (p. 668). These terms are tied together by Connelly et al. in the framework of a theory of narrative and storytelling. They argue that:

...the story is a construction and, therefore, is a step in the movement from field texts (data) to interpretation and research knowledge. Accordingly, the story is neither factual, in the sense that empirical quantitative data are often thought of as factual, nor is it arbitrary and fanciful. It is something which has an empirical base, is an interpretive construction, and is told for a larger research purpose (p. 669).

The introduction of personal-practical knowledge of teachers, using a narrative mode of inquiry, and the interpretive construction of teacher stories, constitute a new theoretical approach to the study of teacher knowledge. From the point of view of Schwab’s commonplaces, I perceive Connelly, Clandinin and Fang He’s approach, beyond their focus on the “teacher”, as leaning towards the “milieu” – the context of teachers’ work. They are concerned with “understanding how teachers’ personal practical knowledge develops in the context of, and influences, the environment in which they work” (p. 272). Using the landscape metaphor, they distinguish between three different contexts – the personal, the in-classroom and the out of classroom. In conclusion, Connelly et al. state that:

A rich, deeper, more narrative understanding evolves from studying what we term the professional knowledge landscape. To understand teaching, we need to understand it in a complex environment (p. 273)

The notion of a professional knowledge landscape expands our view of teacher knowledge from a narrow view of “instructional competencies” to encompass teachers’ narrative unities, as persons and professionals whose knowledge is found in their past experience, present mind and body, and their intentions for the future.

The following paper also moves beyond “subject matter”, as the cardinal factor in teacher knowledge, to subject matter in the curriculum.


The focus of this paper is “curriculum subject knowledge.” It is interesting that instead of subject matter knowledge itself, the researchers concentrate on subject matter knowledge for teaching – in Shulman’s (1986) terms the connection between subject matter and curricular demands. The complex demands of primary school teaching, including the subject matter knowledge of primary teachers, who need to teach more than one subject, is presented through a case study of 15 teacher-mentors and student-teacher working with the new 10 subject national curriculum in the United Kingdom. In this study, both Schwab and Shulman play a significant role. The authors mention Schwab’s understanding of subject matter:

Substantive and syntactic knowledge of a subject for Schwab comprises its logical structure, its key concepts, ways of defining and analyzing in the subject; and the standards of judgment that operate in the field (p. 735).

On the other hand, they relate, as well, to Shulman’s concept of pedagogical content knowledge.

Edwards and Ogden claim that Shulman’s categorization of teacher knowledge “focused on knowledge structures rather than knowledge construction” (p. 736). What teachers have to be able to do is:

...position learners in relation to the curriculum in ways that allow these teachers to provide learners with the contingent cognitive and affective support required to enable them to engage with the discourse of the subject in question. Subject knowledge is consequently not something to be merely applied in classrooms. (p. 737)
The researchers analyzed mentoring conversations from 15 mentor-student dyads in mathematics, science, and religion. Content analysis of the taped conversations showed that only a small proportion of talk:

related to the transformation of student teachers' subject knowledge into tasks which aim to promote pupil learning of the subject (p. 744).

The main insights of this study concern the identification of teacher subject matter knowledge as dynamic and evolving in relation to student tasks and learning. The implications for teacher education are discussed in the paper.

Some scholars attempt to generalize teachers' professional growth in the form of models. The following paper is an example of this endeavor.


The authors devote a large part of their paper to the elaboration of different perspectives on teacher change. They claim that:

The central focus of current professional development efforts most closely aligns with the 'change as growth or learning' perspective. Within this perspective, change is identified with learning, and it is regarded as a natural and expected component of the professional activity of teachers and schools (p. 948)

The identification of professional growth with inheriting a body of theory and research puts the responsibility for building teacher knowledge on a continuous learning process.

"Teacher change" is closely connected to growth of teacher knowledge. Different models of teacher change are discussed in the paper. According to the authors, four domains encompassing the teacher's world are connected to the process of teacher change:

The personal domain (teacher knowledge, beliefs and attitudes), the domain of practice (professional experimentation), the domain of consequences (salient outcomes), and the external domain (sources of information, stimulus or support) (p. 950)

The authors suggest an interesting model of linking teacher action to teacher knowledge. In this view, changes in teacher action might lead to changes in teacher knowledge and beliefs:

For example, teacher experimentation involving increased student talk may be interpreted by one teacher as a change in classroom noise level, and by another teacher as a change in student engagement. Since the same overt social behavior is open to such disparate interpretation, it is the interpreted change, rather than any observable change that is crucial to subsequent change in teacher knowledge and beliefs (p. 956)

Therefore

Changes in teacher beliefs regarding the efficacy of new practices are mediated by the teachers' inferences linking the new practices to salient outcomes (p. 957)

It is interesting to note the authors' perception of the variety of teachers' knowledge types in Shulman's terms:

Teacher growth becomes a process of the construction of a variety of knowledge types (content knowledge, pedagogical knowledge, and pedagogical content knowledge) by individual teachers in response to their participation in the experiences provided by the professional development program and through their participation in the classroom (p. 955)

The model suggested by the authors is based on data of three Australian studies that provided an empirical foundation for their interconnected model.


This paper focuses on an important context of the development of teacher knowledge, namely, field experiences

It focuses on student teachers' construction of teaching self in the three facets of student teaching context, namely the action context, the socio-professional context and the supervisory context (p. 483)

This differentiation reflects the author's complex view of the growth and development of teacher knowledge, the teaching act in classrooms, the interpersonal aspects of teaching, and finally the impact of supervisors on shaping knowledge. This view is practice oriented: the practice of teaching, the practice of developing interpersonal relations with diverse participants in school life, and the practice of learning from and with supervisors.

The mode of inquiry adopted is a qualitative case study of seven student teachers' professional learning in a two year sub-degree initial teacher education programme for secondary school teachers in Hong Kong (p. 486)

The findings of this study revealed that the action context, social-professional context and supervisory context offer different sorts of challenges and support.

It is through this process that the individual gradually constructs and reconstructs his/her teaching self in the midst of student teaching experiences. (p. 487)

In teacher education, it is important to offer an appropriate mix of challenge and support to foster the professional growth of student teachers.

It is interesting to note that Tang sees teachers' developing knowledge as expressed in the construction and re-construction of a "teaching self". This view seems to be close to Connelly and Clandinin's (1988) approach to the nature of teachers' knowledge as personal-practical:

Personal practical knowledge is in the teacher's past experience, in the teacher's present mind and body, and in the future plans and actions (p. 25).

The author emphasizes the impact of context similar to Connelly and Clandinin's claim concerning the importance of the various "landscapes" of education.

An interesting statement introduces the notion of several dyads that shape teachers' knowledge

...productive student teaching experiences take place in a student teaching context with an appropriate mix of challenge and support which drives student teachers' ongoing movement from tension to equilibrium and from dissonance to resonance between the teaching self and core self (p. 495)

These conflicts might have important implications for the study of teacher knowledge.


The closer we come to the present time, the more demands are made upon the knowledge required by teachers. Holden and Hicks start this paper with the following question:
What is it that teachers need to know if they are to help pupils make sense of the world in the early 21st century? (p. 13)

The authors accept the following description of the nature of global education:

Global education involves learning about those problems and issues which cut across national boundaries and about the interconnectedness of systems—cultural, ecological, economic, political, and technological. Global education also involves learning to understand and appreciate our neighbours with different cultural backgrounds from our own; to see the world through the eyes of others; and to realize that other people of the world need and want much the same things. (p. 14, in Tye, 1999, p. 17)

Still, an international survey (Tye, 1999) found that only a small number of teacher education programs anywhere in the world attempt to promote global education. The purpose of the study conducted by the authors was to investigate the knowledge and understanding that student teachers have of global issues. Both quantitative (a questionnaire) and qualitative (in-depth interviews) methods were used to collect data from three samples of student teachers in four English universities, all together 856 participants at the primary and secondary school level.

Whilst the majority of those interviewed were committed and enthusiastic about including global perspectives in their teaching, this was tempered by concerns about how best to teach about what seemed complex and sensitive issues (p. 21)

It is interesting to note that the sources of information are primarily TV and newspapers, friends, family, and internet.

The major message of this paper is that pre-service teacher education programs have to broaden their perspectives concerning the knowledge base of teachers.

There needs to be time and provision for students to learn strategies for teaching about global and controversial issues, time for them to improve their own knowledge and understanding, and time for them to learn how to critically evaluate sources of information (pp. 22–23)

Teacher education cannot be limited to the development of teachers’ competencies in teaching subject matter domains. It requires a more socially-conscious conception of teaching and teacher education. In Schwabian terms, the milieu has to play a significant role in the planning and implementation of teacher education that will help young people to make global connections.


In this paper we find the extension of teacher knowledge from a focus on subject matter, and strategies for teaching, to include awareness of societal issues, such as multiculturalism. According to this approach, teacher education programs have to educate for teaching in multicultural contexts. How this might be achieved is the main goal of this paper:

The primary purpose of this study was to analyze the ways in which multicultural education was being framed in multicultural education teacher preparation coursework. (p. 312)

The method used was qualitative analysis of 45 syllabi from multicultural education classes:

Gorski found that a majority of the syllabi (58%) were dominated by elements of “liberal multiculturalism”, celebrating cultural differences. Approximately 30% of syllabi are close to Jenks, Lee, and Kanpol’s (2001) description of “critical multiculturalism.” Power relationships, oppression and inequity are explored in those courses. About 16% of the syllabi reflected the notion of “conservative multiculturalism”, framing multicultural education in assimilationist terminology. Based on his analysis, Gorski suggests a view typology of approaches to multicultural education:

I named them (1) Teaching the “Other,” (2) Teaching with Tolerance and Cultural Sensitivity, (3) Teaching with Multicultural Competence, (4) Teaching in Sociopolitical Context, and (5) Teaching as Resistance and Counter-Hegemonic Practice. (p. 312)

Gorski views multiculturalism knowledge as including a basic orientation, knowledge about diverse cultures and appropriate teaching skills. Gorski maintains that

the typology that emerged from this study provides one lens through which teacher education programs can consider their multicultural education course offerings. What, exactly, do these courses intend to teach teachers to do and be? And what are the implications of this for educational equity and social justice – the roots of multicultural education? (p. 317)

The focus of multiculturalism education concerns what teachers could be and do.


This paper takes us back to the realm of teachers’ “practical theories”, focusing on the learning process of their students concerning subject matter.

Given the decision to define learning of student teachers as changes occurring in their practical theory, the research questions for this study are as follows:

I Do student teachers develop a well developed practical theory?
II How do student teachers modify their practical theory? (p. 119)

The author conducted a small-scale descriptive study of eight student teachers of mathematics in a one year post-graduate teacher education program in the University of Groningen in the Netherlands. This study is in the form of a multiple case study. Data was collected using learner reports, concept maps and interviews. Intra-case and inter-case qualitative analysis was carried out. The following categories of content of the practical theory of student teachers were identified: instructional perspectives; interactional perspectives; contextual perspectives. These perspectives might be compared with Shulman’s categories of pedagogical knowledge of learners, context knowledge and the knowledge of educational contexts. The author is impressed by the finding that:

The student teachers that participated in this research developed a practical theory in which they pay attention to pupils’ learning. Given the state of professional development at which the participants found themselves, this development of the content of their practical theory can be described as remarkable (p. 125)
Moreover

...it emerged that almost all subcategories of the system of categories used in the study featured in the practical theory of all participants. This means that by the end of their training, participants had developed a practical theory which allowed scope for the instruction, interactional and contextual perspectives. We can conclude from this that all student teachers developed a rich practical theory (pp. 125–126)

These findings are important and their message for teacher education is that learning to teach in a work-based context has great potential for the professional development of teachers. This paper joins the tendency to view teacher knowledge as dynamic and encompassing rich and diverse components.

4. Discussion

I start the discussion with a personal comment. I found the process of reviewing a set of papers, focusing on one theme, most interesting and rewarding. The selection of papers for analysis was a difficult task as quite a number of publications could be viewed as pertaining to teacher knowledge. Still, I decided to limit myself to nine papers as the optimum number without turning my review into a list of papers to be summarized.

In this discussion, I focus on several issues. First, the definition of teacher knowledge. It seems that over time the term teacher knowledge was expanded and broadened significantly. The earliest paper analyzed, Grossman and Richert (1988) defined teacher knowledge as follows:

a body of professional knowledge that encompasses both knowledge of general pedagogical principles and skills and knowledge of the subject matter to be taught (p. 54)

Thus, teacher knowledge focuses on enabling teachers to fulfill their central role: teaching subject matter domains using appropriate pedagogical principles and skills. Following Connelly and Clandinin (1988), Tamir (1991) suggests integrating professional, general, and personal idiosyncratic knowledge of teachers. He views this complex knowledge of teachers as vital for ensuring their students mastery of subject matter. The notion of teacher knowledge as related to instructional competencies in the classroom is expanded by Connelly, Clandinin and He (1997). Their focus is on teachers’ personal-practical knowledge developing over time in different contexts.

The paper by Edwards and Ogden (1998) brings us back to the centrality of subject matter in teachers’ knowledge. The focus of the paper is “curriculum subject knowledge”, namely, “the transformation of student teachers’ subject knowledge into tasks that aim to promote pupil learning of the subject” (p. 744).

Scholars choose their own definitions of knowledge growth of teachers. Clarke and Hollingsworth prefer to speak about “teacher change.” As far as this change concerns the personal domain of teachers, their knowledge, beliefs and attitudes, the authors suggest that changes in teachers’ action in their practice might cause a process of the construction of a variety of knowledge types (content knowledge, pedagogical knowledge, and pedagogical content knowledge) by individual teachers in response to their participation in the experiences provided by the professional development program and through their participation in the classroom (p. 955).

The impact of context on teacher knowledge is highlighted in Tang’s (2003) paper that focuses on student-teachers’ professional learning in their field experiences. The paper differentiates among three facets of student teaching context: the action context, the socio-professional context and the supervisory context. The dynamics of the construction of teachers’ knowledge is emphasized, the process of gaining knowledge. Though the paper follows student teachers in their practicum, it has general implementations for understanding the development of teachers’ knowledge, as teachers at all phases of their professional lives are influenced by their own actions, as well as by their personal relations at school, and the feedback from supervisors.

The conflict between “challenge and support”, “tension and equilibrium”, “dissonance and resonance” mentioned by Tang have important implications for the study of teachers’ knowledge.

The closer we come to the present time, the more demands are made on the knowledge required by teachers. Holden and Hicks (2007) start their paper with the following question:

What is it that teachers need to know if they are to help pupils make sense of the world in the early 21st century? (p. 13)

Teacher knowledge has been extended from knowledge of subject matter, curriculum and pedagogical content knowledge, to include general themes like global issues and multiculturalism.

An interesting finding of Holden and Hicks is that the sources of information about global concerns are out of school ones, like TV, internet, even friends and family. This situation calls for a major change in teacher education programs as education cannot be limited to the development of teachers’ competencies in teaching subject matter domains. It requires a more socially-conscious conception of teaching and teacher education. In Schwabian terms, the milieu has to play a significant role in the planning and implementation of teacher education that will help young people to make global connections.

Societal issues become central to the envisioned teacher knowledge. Thus, we find Gorski’s (2009) paper that analyzes multicultural coursework syllabi in teacher education programs. Gorski views multiculturalism knowledge as including a basic orientation, knowledge about diverse cultures, and appropriate teaching skills. Gorski maintains that the typology that emerged from this study provides one lens through which teacher education programs can consider their multicultural education course offerings... What, exactly, do these courses intend to teach teachers to do and be? And what are the implications of this for educational equity and social justice — the roots of multicultural education?  (p. 317)

The typology he suggests for multicultural education emphasizes the sociopolitical context, as well as teaching as resistance. The role of teachers is revolutionized and with it the notion of appropriate teacher knowledge.

Buitink (2009) takes us back to the realm of teachers’ “practical theories”, focusing on the learning process of their students concerning subject matter.

Given the decision to define learning of student teachers as changes occurring in their practical theory, the research questions for this study are as follows:

I Do student teachers develop a well developed practical theory?
II How do student teachers modify their practical theory? (p. 119)

The categories of practical teacher theories are close to Shulman’s categories of pedagogical knowledge of learners, context
knowledge and the knowledge of educational contexts. The major message of this paper, with its emphasis on the work context of teacher education, is close to Tang’s focus on the importance of field experiences, and even on the Clark and Hollingsworth connection between teacher action and teacher knowledge.

Summing up this part of the discussion, we can see several tendencies in the development of the concept of teacher knowledge. There is the extension of the term to include societal issues. As well, one finds a growing focus on the personal aspects of knowledge. The role of context in shaping teacher knowledge plays a crucial role in the analyzed papers.

The second question presented at the beginning of my paper concerns the manner in which scholars attempt to uncover teacher knowledge, their modes of inquiry. It is noteworthy that the main mode of inquiry in the analyzed papers is qualitative, interpretative. The authors of the various papers were interested in the concrete experiences and views of student teachers, and teachers, concerning their knowledge and its acquisition. This approach yields important insights but leaves open several questions. First, the curricular question: what concrete opportunities for gaining knowledge are offered to student teachers? Only Gorski analyzed syllabi of teacher education programs. An article by Grossman and Thompson (2008) in TATE does address the importance of sources for teacher learning. For instance, Grossman’s (1990) book on The making of a teacher: Teacher knowledge and teacher education shows subject-specific methods components of teacher education impact teachers’ practices.

Another question concerns the modes of teachers’ use of their professional knowledge. This question requires detailed observations and documentation of teachers’ actions in classrooms, trying to link their knowledge and practice.

The implications of the diverse studies for schooling, and for teacher education, depend on the views concerning teachers’ knowledge. Emphasizing the personal aspects of teachers’ knowledge leads to a different understanding of teachers’ classroom practice. A socially-conscious approach requires teacher education programs that focus on societal issues.

4.1. Concluding comments

The analysis of nine TATE papers on teacher knowledge yielded some insights into the development of this concept over time. Whether this development has found its way into teacher education programs is an important question. It seems that the prevailing emphasis on standards, and measurement of achievement, influences teacher education. For instance, Hayes, Capel, and Katene (2008) claim that content knowledge was seen as being most important by student teachers and their mentors. On the other hand, university tutors had a broader conceptualization of subject knowledge in line with Shulman’s (1987) categories of teacher knowledge:

Within subject knowledge you have to have knowledge of: curriculum; how people learn; different learning strategies to suit different learners. You have to have knowledge of wider aspects i.e. pedagogical knowledge. So, there is a whole range of knowledge bases you need, which all together produce subject knowledge for physical education (University tutor C) (p. 336)

The apparent gap between scholarly frameworks and studies, and the reality of teacher education and schooling, calls for attention by educators and policy makers.

The papers analyzed in this review share a common scholarly language and are based in Western culture. It is important to see, as well, studies conducted in other cultures, which might have a different view of teacher knowledge.

It would be interesting to introduce the analysis for discussion in a joint forum of scholars and practitioners.

Articles reviewed


References


