Pedagogical Content Knowledge in Korean Language Education

: Confusions, Issues, and a Tentative Solution

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I. Introduction

In the field of Korean language education, professional development is relatively a recent focus (민병곤, 권회경 & 이은미, 2007). Educational stakeholders, including policymakers and researchers realize the importance of professional development because successful educational reforms hinge on the qualifications and effectiveness of teachers (Garet, Porter, Desimone, Birman, & Yoon, 2001). For the successful professional development, both student teachers and in-service teachers should be equipped with adequate teachers' knowledge, skills, and attitudes. Among them, teacher knowledge has been recognized as essential asset and even obligation in teachers' work (김경주, 2010; 양미경, 2009; 이화진 외, 2006; 최민영, 2012; Cohen, 2008).

Since Shulman's (1986, 1987a) seminal suggestion for pedagogical content knowledge (PCK), teacher educators and educational researchers within specific subject areas have investigated teacher knowledge thoroughly in order to prepare for student teacher education programs, professional development, and teacher assessments (Cochran-Smith, & Lytle, 1999). Despite the agreement that PCK is a useful concept to understand teacher knowledge, the conceptualization of PCK has been debated due to its fuzzy boundaries, definitions,

and subcategories because scholars interpreted PCK in different ways.

In Korean language education, defining PCK is more difficult to understand. While domains of Korean literature and grammar have unique academic contents and backgrounds as similar to the content areas such as science and history, domains of language use (e.g., reading, writing) seem not to have such contents at first glance (김경주, 2010). If it is difficult to identify adequate "content knowledge" (subject matter knowledge, SMK), how can PCK be conceptualized? Due to diverse works conducted under the name of PCK in the field of Korean language education (e.g., 김경주, 2010; 박태호, 2011; 최민영, 2012; 이화진 et al., 2006), different interpretations and applications of PCK exist in the fields of Korean language education. In this sense, it is necessary to focus on and discuss about what PCK means in Korean language education.

This paper consists of three main parts. First, the original idea of PCK in Shulman (1986, 1987a) and its following extension and revision of PCK will be discussed in a historical context. Second, confusions and issues of PCK in education will be revisited in a contemporary perspective. Additional issues of PCK in Korean language education will be also discussed. Last, a tentative solution of PCK in Korean language education will be suggested, based on the previous discussions. This work, in turn, will contribute to the further theoretical and practical understanding of Korean teachers' knowledge including PCK.

II. Background

Before Shulman's seminal work, teacher knowledge is conceptualized dichotomous: subject matter and general pedagogy. It is assumed that teaching is automatically orchestrated when teachers are well trained by content and general pedagogy courses separately in the college of education. Criticizing of accreditation and certification

of teacher education, Shulman (1986) points out that the traditional teacher education programs deal with content courses and pedagogy courses as mutually exclusive. Teaching practice by combining content and pedagogy is the entire burden of teachers' own work. Shulman is one of the first scholars to doubt this assumption.[1] The most famously cited two articles, "*Those Who Understand*" (1986) and "*Knowledge and Teaching*" (1987a), show that PCK, the "amalgam" of teachers' pedagogical knowledge and content, is an important concept to investigate, as it enables to identify the "distinctive bodies of knowledge teaching" of teachers (p. 228) from other professionals. His ingenious conception of PCK is addressed (Shulman, 1986):

> Within the category of pedagogical content knowledge I include, for the most regularly taught topics in one's subject area, the most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, and demonstrations— in a word, the ways of representing and formulating the subject that makes it comprehensible to others … [It] also includes an understanding of what makes the learning of specific concepts easy or difficult: the conceptions and preconceptions that students of different areas and backgrounds bring with them to the learning (p. 9).

Since Shulman's suggestion of PCK, a research project ("Knowledge Growth in Teaching Project"), including his several colleagues at Stanford University, have launched to focus on how PCK works in teacher education (Segall, 2004). For example, Grossman (1989) conducted a case study of eight student teachers, who were all graduated from prestigious colleges and universities and were well prepared for

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1 Nevertheless, Shulman's idea was not new. Dewey already admonished that teachers should "psychologize" content to students' developmental level before Shulman (Grossman, 1989). In fact, Shulman revisited the Dewey's idea, claiming that traditional emphasis on content knowledge should be reconsidered. Shulman's contribution is to theorize the Deweyan idea in the public so that many educational researchers and teachers use in universities and schools.

their subject matter, English literature. Among them, only three new teachers took both English literature and teacher education courses, while five others took only English literature courses. The three teachers' transformation and representation of the contents were quite different from the others. The difference was interpreted due to lack of PCK. The five teachers who did not take pedagogy courses seemed to struggle to understand students' learning English literature, let alone teaching skills of contents. Subsequent studies also confirmed that PCK played an important role in teaching (Angell, Ryder, & Scott, 2005; Bransford et al., 2000). Other studies demonstrated a positive relationship between teachers' PCK and student achievement (Staub & Stern, 2002).

These studies provide scholars confidence that PCK is a useful concept and worth investigating further. The number of studies cited Shulman's two articles (1986, 1987a) are more than 1,200-1,500 beyond teacher education area (Ball, Thames, & Phelps, 2008). PCK has permeated in a variety of educational disciplines such as English (Snow et al., 2005; Grossman, 1988), mathematics (Fennema & Franke, 1992; Marks, 1990; Ball et al., 2008), science (McDiarmid et al., 1988; Abell, 2008), geography (Ormrod & Cole, 1996), and history (Seixas, 1999), as well as teacher education (e.g., Cochran, DeRuiter, & King, 1993). Given the research progress, Shulman and his colleagues pave a way to see teacher knowledge as a new area to investigate. Efforts on identifying PCK within specific content areas continually progress, although more than half works on PCK are studied in mathematics and science education (Ball et al., 2008). In terms of reading education, a separated volume about PCK for reading teachers (Snow, Griffin, & Burns, 2007) is published.

In the fields of Korean language education, a growing body of studies discuss about how the PCK concept can be used and applied in Korean language education, including observation and analysis of teaching practices (김병수, 2013; 최민영, 2012), design and development of instructional strategies (김경주, 2010; 김인영, 2013; 박태호 &

최민영, 2013; 송현정, 2009; 안라경, 2012), analysis and development of teaching material (이경화, 2014; 이경화 & 최민영, 2013), and professional development and instructional consulting (김경주, 2010; 민병곤, 권회원, & 이은미, 2007). In particular, scholars in Korean language education exert efforts in analyzing and using PCK in sub-domains of Korean language education: vocabulary (이경화 & 김지영, 2012), reading (최민영, 2012), writing (김경주, 2011, 박태호 & 최민영, 2013), grammar (송현정, 2009), and literature (김인영, 2013).

III. Confusions and Issues of PCK: Educational in General and Korean Language Education

Although PCK has been revealed as a valuable construct, it needs to revisit the concept today because Shulman's original idea was addressed nearly 30 years ago. One more factor we should also consider is that teacher knowledge based on Shulman (1986, 1987b) focuses heavily on knowledge of teaching but not assessment. Both the change of times and absence of assessment knowledge raises doubts about the validity and feasibility of the PCK construct. In this chapter, I discuss confusions and issues of PCK in the following two sections: education in general and Korean language education.

1. Confusions and Issues of PCK: Education in General

There are five issues and confusions in PCK in education, although they overlap to some degrees. The first issue is a conceptual issue which directly relates to Shulman's original concept. PCK seems fuzzy so that it results in diverse interpretations. The remaining four issues are suggested when PCK is reinterpreted in the contemporary contexts. The original PCK seems outdated. It has static (objectivistic) view and does not include teachers' practical knowledge (wisdom of practice), assessment knowledge, and metacognition.

1) Diverse Interpretations of PCK in Nature

Theoretical discussions around PCK have been diversified according to educational researchers' perspectives. Different conceptualizations about teacher knowledge based on PCK raise a doubt, whether the concept of PCK can be justified as a valid construct. In other words, it is still unclear that how educational researchers and teacher can determine the construct among too many alternatives (Appendix A). For example, Fennema and Franke (1992) followed Shulman, so that PCK is an intersection between content knowledge and pedagogic skills, whereas others considered PCK as a unitary concept that includes all other forms of knowledge (Marks, 1990; Turner-Bisset, 1999). Still others claimed that instead of knowledge, a term, "knowing" (pedagogical content knowing; PCKg) captures characteristics of teacher knowledge vividly in that knowing implies an active process rather than a set of knowledge base in combination (Cochran et al., 1993). Or, "pedagogical context knowledge" is proposed that includes all of academic, professional, PCK, and classroom knowledge (Barnett & Hodson, 2001).

These diverse perspectives on PCK give us confusions, where a boundary between PCK and other forms of knowledge is placed. A more extreme case, some scholars denied the PCK concept because all content knowledge is pedagogic in nature (McEwan & Bull, 1991). The dissent views on PCK are mainly due to the unclearness of the PCK notion. Originally, Shulman did not seem to categorize teacher knowledge and PCK deliberately, but rather wanted the educational community to focus on PCK for further research.

2) Static and objectivistic view

Although Shulman's categorization is meaningful, it is implicitly static that the knowledge base can be analyzed into bits of subparts. In other words, there is a systematic knowledge of an encyclopedia, made from university-based scholars, in which all knowledge is already set before a teacher enters into his or her own classroom. Since

a series of subpart-knowledge of PCK is ready-made as static status, only the work teachers can do is to buy the university-made knowledge. Rather than teachers' flexible and professional decisions in dynamic contexts, teachers' role is limited only to follow the static rule.

A corollary critique of Shulman's PCK and teacher knowledge is that it has a view of objectivism. For example, McEwan & Bull (1991) argued that it is unclear whether Shulmans' philosophical stance is constructivist:

> To be sure, Shulman does not espouse objectivism or any other systematic epistemological theory on the grounds for his distinction. But because of the natural support that objectivism lends to the distinction [between scholars and teachers], the objectivist flavor of Shulman's language, and the traditional attractiveness of objectivism (p. 321).

Regardless of the validity of this comment, it is clear that Shulman did not pose a constructivist perspective (Cochran, Deruiter, & King, 1993).

3) Little concern about teachers' practical knowledge

Teachers' knowledge and experience on a daily basis are discussed as a notion of teachers' *practical knowledge* or *wisdom of practice* (Elbaz, 1981; Shulman, 1987b; Schwab, 1971). Teachers' practical knowledge can be conceptually distinguished from PCK. The practical knowledge is related to the concept of *what teachers know*, whereas the teacher knowledge base (e.g., PCK framework) focuses on *what teachers should know* (Fenstermacher, 1994). For example, Elbaz (1981) observed a high school teacher and found what the teacher knows is not theoretical propositions, but how to carry out instructional tasks, resolve conflicts, adjust grouping, and differentiate instruction. Teachers should cope with continuous issues of *unpredicted dilemmas* in their dynamic classroom contexts (Lampert, 1985).

Even the wisest practitioners' knowledge or folk pedagogy may

be wrong and sometimes be a myth (Leinhart, 1990; Bruner, 1996). Or, practical knowledge is difficult to generalize across contexts because a teacher's practical knowledge is dependent on specific contexts. In other words, a teacher's best practical knowledge may not work in another teacher's classroom. For that reason above, many studies of PCK so far seem to exclude teachers' practical knowledge. Despite the imperfectness of teachers' practical knowledge, it should be brought into the research area of PCK. Teachers' practical knowledge provides valuable insights that are sometimes difficult to translate into researchers' words.[2] The construct of PCK will be powerful as it extends to include teachers' practical knowledge.

4) Scant focus on teachers' assessment knowledge

When Shulman proposed PCK, the concept of assessment was limited to examination of student achievement. At that time, assessment was regarded as a clearly different concept from teaching. However, assessment research in recent years has shifted from separate view of teaching and assessment, to reciprocal view of assessment for teaching and learning. For example, Crook (1988) reviewed 14 studies and summarized that students' learning strategies and their resulting achievement are influenced by how assessments are addressed and implemented; factual level of assessment relates to students' use of *surface learning strategies* (e.g., memorization of the contents to be tested). In more recent comprehensive literature review (580 stud-

2 Teachers' practical knowledge, or wisdom of practice (Shulman, 1987b), is sometimes inconsistent with research recommendation. However, it does not mean that teachers' practical knowledge is always useless or unscientific. For example, there is research proven result about teachers' wait-time; the more waiting for students' response from a teacher's questions, the better getting students' critical and high-order thoughts (Rowe, 1974; cited in Shulman, 1987b). Yet, teachers do not necessarily follow the research result, although they know the fact. The teachers' such reluctant behavior is interpreted, "one reason the wise practitioner may find wait-times unattractive is that they bring with them an increase in the problems of classroom managements. (p. 263)."

ies in Black & Wiliam, 1998), there is clear evidence of effectiveness of formative assessment: "Typical effect sizes of the formative assessment experiment were between 0.4 and 0.7. These effect sizes are larger than most of those found for educational interventions (Black & Wiliam, 1998, p. 141)."

However, research on teacher's assessment knowledge reveals the fact that teachers have little knowledge of assessment so that their practices on assessment is disappointing (Boorkhart, 2001; Stiggins & Bridgeford, 1985). From this literature review, Shulman's PCK framework or other PCK studies do not yet fully address the importance of teachers' assessment knowledge.

5) Lack of teachers' metacognition (reflection and adaptation) of teaching practice

Two concepts are newly suggested after Shulman's PCK due to the change of perspectives on learning and instruction. The first concept is teachers' *reflection* during and after teaching practices. Schön (1983) suggests that pre-made, generalizable knowledge in the university often does not work in a specific classroom context that requires teachers' ongoing professional determinations which are key for successful teaching. In this sense, Schön highlights on teachers' ongoing reflective thinking of their practices as reflection "in action" (during teaching) and "on action" (after teaching). When applied it into PCK area, teacher's self-reflection can play a role in revising and updating their previous PCK.

Second, *adaptive* expertise (Hammerness et al., 2005) is addressed to reflect the professional teaching practices. According to Hammerness and her colleagues, teachers should be equipped with metacognition of their teaching because teachers encounter with problematic situations which are often complex, dynamic, and non-algorithmic:

- Teaching is never routine.

- Teaching has multiple goals.
- Teaching is one in relationship to very diverse groups of students.
- Teaching requires multiple kinds of knowledge to be brought together in an integrative way (pp. 377-378).

Therefore, teachers have to adjust, revise, and update their practices in accordance with teachers' goals as well as students' needs. However, PCK does not include this type of adaptive knowledge in its original concept.

2. Confusions and Issues of PCK: Korean Language Education

There are two issues about PCK in the Korean language education. One relates to the defining issue of PCK. As it is challenging to define subject matter knowledge (SMK) in language use, PCK is more difficult to conceptualize because PCK is transformative knowledge of SMK. The second issue revolves around relationships between university researchers' construction of PCK and teachers' own PCK. While nearly all Korean language education researchers agree that PCK is teachers' (individual) knowledge, some researchers provide their guidance or standards as exemplary PCK in order to help teachers develop sophisticate teacher knowledge.

1) Elusive boundary between SMK and PCK in Korean language education

In Korean language education, defining PCK is a troublesome issue. One reason for the difficulty is attributable to diverse subdomains of Korean language education: language use (i.e., listening and speaking, reading, writing), Korean literature, and grammar. Depending on the subdomains, it is difficult to define and conceptualize SMK and PCK.

Since Korean literature and grammar domains have their own

academic backgrounds, it is relatively easy to conceptualize SMK in both domains. For example, literature knowledge (e.g., knowledge of texts, knowledge of context, meta-text knowledge; 류수열 & 김상욱, 2006) is regarded as SMK in literature domain. The status of PCK in Korean literature and grammar domains is similar to that of other content areas (e.g., science education). When SMK is transformed by teachers, the transformed SMK becomes a learning content for students to learn. For example, in Korean literature there is literature knowledge of narrative point of view (e.g., first-person or omniscient point of view). Students also are supposed to learn the narrative point of view in order to understand Korean novels better.

However, SMK is difficult to define in the language use domains (e.g., reading, writing). For example, there are reading-related theories and knowledge such as schema theory and Kintsch's (1998) Constructive-Integrative model. Such reading-related knowledge can be useful to university researchers and/or teachers, while students do not need to know and learn them directly.

The difficult conceptualization of SMK causes Korean educational researchers to understand PCK/SMK in different ways. For example, different perspectives of SMK/PCK are described below:

- **SMK and PCK is the same concept** (김경주, 2010): "It is inappropriate to distinguish between SMK and PK because the declarative knowledge in Korean language education is not transmitted as a form of knowledge. Rather, it is learned through language activity in an authentic language context" (p. 116, translated by author).

- **SMK is defined as declarative, procedural, and conditional knowledge** (최민영, 2012): Although this work does not clearly mention what SMK is, SMK is indirectly mentioned as the three types of knowledge (declarative, procedural, and conditional knowledge).

- **No explicit definition of SMK/PCK in the Korean language educa-**

tion (박태호, 2011; 이경화 & 최민영, 2013): Many Korean scholars use the transformative nature of PCK but do not show what SMK and PCK really are in the context of the Korean language education.

In fact, international scholars in language education also seems to feel difficulty in defining PCK. For example, Freeman (2002) boldly argues for the abolishment of PCK concept, "when applied to language as subject matter, PCK becomes a messy and unworkable concept" (p. 2). In addition, some researchers and institutions describe PCK as an umbrella term of teacher knowledge in language education (2010) (International Reading Association, 2008; Love, 2009; Small, 2006). However, this unitary view of PCK in the language education field has also less empirical evidence and research than other subject areas (e.g., science education).

2) Dual purposes of PCK: PCK as exemplary, representational standards for professional development vs. PCK as individual teachers' transformative knowledge

The concept of PCK is used differently by different researchers. The first purpose of PCK research is a use of PCK as exemplary professional standards. For example, Korea Institution of Curriculum and Evaluation (KICE; 이화진 et al., 2006) establishes professional teaching standards based on the concept of PCK. In addition, university researchers produce PCK-related knowledge, including exemplary teaching strategies (김경주, 2010; 김인영, 2013; 박태호 & 최민영, 2013; 송현정, 2009) and analysis of teaching material in terms of PCK (이경화, 2014; 이경화 & 김지영, 2012; 이경화 & 최민영, 2013). These works are good resources and references of PCK in order for teachers to use. As such PCK-related standards are developed by university researchers, I call it as "PCK-U" (Pedagogical Content Knowledge by University researchers).

On the other hand, there is another approach to investigate teachers' knowledge in a specific context, as an amalgam of SMK and PK

for the purpose of instruction (김병수, 2013; 최민영, 2012). This type of PCK is more fit with Shulman's original idea. I call it as "PCK-C" (Pedagogical Content Knowledge by Classroom teachers).

The umbrella term of PCK brings with more confusions when they are used interchangeably in different contexts. Since both types of knowledge are essential to understand and promote teacher knowledge, it is better to distinguish the two concepts by the two different terms, PCK-U and PCK-C.

IV. A Tentative Solution to the Issues of PCK in the Korean Language Education

The aforementioned confusions and issues of PCK in both general education and Korean language education should be resolved through ongoing theoretical discussions and empirical studies. As a beginning step, a tentative solution to those issues is suggested (Figure 1). The tentative model should resolve several aforementioned issues as follows.

- It includes dynamic (transformational) nature of PCK,
- reflects teachers' practical knowledge (wisdom of practice) and assessment knowledge,
- includes concepts of teachers' reflection and metacognitive adaptation,
- clarifies the concept of SMK and PCK,
- and distinguishes between PCK-U and PCK-C.

While resolution of the fourth element (conceptual clarification of SMK and PCK) remaining open for further investigation, this model tries to resolve the other issues.

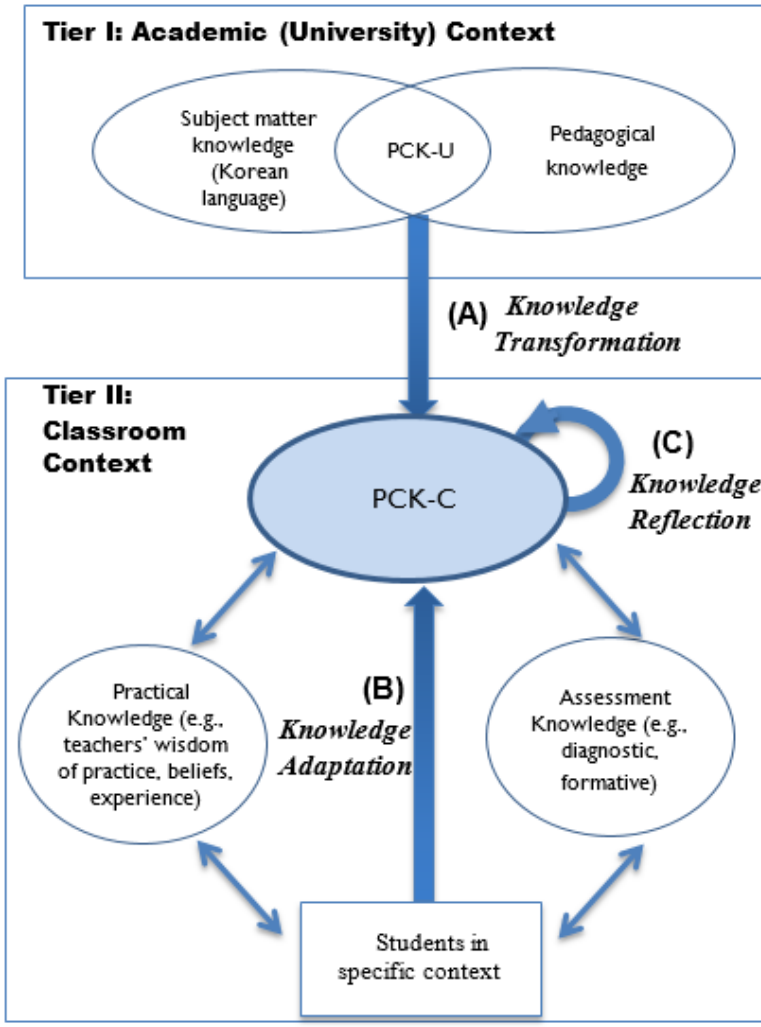

Figure 1. A reconceptualization of PCK in Korean language education[3]

3 Note. (a) PCK-U designates university researchers' guidance/standards for teachers' PCK in generalizable context. (b) PCK-C designates individual classroom teachers' PCK in a specific classroom context. (c) Arrow "A" (knowledge transformation) designates teachers' knowledge transformation from PCK-U to PCK-C before/during instruction in a classroom context. (d) Arrow "B" (knowledge adaptation) designates teachers' adapting their instruction based on the consideration of their experience

The reconceptualization of PCK should be beyond static and objectivistic perspective. The new concept of PCK should not stay in a ready-made, university researcher's generalizable knowledge (PCK-U), although the university knowledge is an important starting point. In addition, the new idea of PCK (PCK-C) relates to teachers' professional action, determination, and reflection. It is context-specific, flexible, reflective, dynamic, and metacognitive in nature.

One important idea to conceptualize this model is from an instructional transformation idea (박태호, 2011; 송현정, 2009). The alternative PCK model should focus on not only about *PCK representation and classification* but *PCK transformation* as well. The knowledge transformation of PCK is important because it allows to conceptualize PCK as context-specific, teacher-centered knowledge, rather than decontextualized university researchers' knowledge.

However, it is not a sufficient condition. As reviewed in the previous section, teachers' wisdom of practice (practical knowledge) from teaching experiences as well as assessment knowledge should be incorporated into the new concept of PCK. Furthermore, teachers' metacognitive knowledge of their teaching and adaptive nature of teaching should be also considered in the PCK model (Figure 1).

In order to teach students successful Korean language instruction, teachers should be provided PCK courses at the university level. Without experience of PCK at the university level, it is entirely Korean language teachers' own burden to transform SMK into PCK. For example, when Korean teachers should design grammar instruction by separate courses of grammar (content) courses and pedagogical courses, it is a violation of PCK idea that Shulman originally pointed out. In this sense, there should be grammar-related PCK-U which university-based researchers provide.

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and practical knowledge on a daily basis, classroom contexts, as well as assessment information. (d) Arrow "C" (knowledge reflection) designates teachers' metacognitive reflection of the instruction, which in turn revises/updates their previous PCK.

One the other hand, PCK-U also relates to teachers' specific knowledge (PCK-C). Generally useful knowledge and strategy, constructed by university researchers, often may not work due to the dynamic classroom contexts. Teachers should *transform* PCK-U into PCK-C (Path A in Figure 1), based on the consideration of their schools, classrooms, and students. One element for the successful profession in Korean language teachers is related to having the high quality of PCK-C (the adequate transformation of PCK-U into PCK-C).

High quality of PCK-C is neither culminated nor completed at this transformation stage. Teachers should design, revise, and update their Korean language instruction in accordance with their students in a specific context. Therefore, adaptive expertise (Hammerness et al., 2005) requires teachers' flexibility to meet students' needs, academic levels, and motivations. For successful instruction, teachers need to adjust, revise, or update their PCK-C. During the knowledge adaptation process (Path B in Figure 1), teachers' assessment knowledge and practical knowledge (wisdom of practice) play important roles in providing valuable information about students and classroom contexts.

Finally, teachers' PCK-C also requires an additional element. As described earlier section, teachers' reflection of their own teaching practices is an important resources for successful instruction (Path C in Figure 1). Teachers may feel failed their instruction despite a carefully designed instructional plan. At the stage of knowledge reflection, teachers may consider diverse sources that cause insufficient Korean language instruction: there are many sources for unsuccessful instructions such as difficulty of contents *per se*, use of inappropriate instruction models, presentation of boring examples, lack of verbal demonstration and explanation, or teachers' speaking problems. The metacognitive reflection of teachers' own instruction provides a valuable information so that teachers can update their previous experiences and PCK.

V. Conclusion and Discussion

This review revolves around pedagogical content knowledge (PCK) from Shulman's periods to contemporary contexts. Despite growing interests in PCK in Korean language education, there are still unresolved issues and confusions around the concept. As problematizing this concern, this paper aims to provide a tentative solution for the issues.

The PCK is a still useful framework that educational researchers and practitioner can use because it overcomes the traditional dual professional systems: separate teaching courses of content and pedagogy. There is also scientific evidence that teachers with sophisticated PCK are better for performing teaching roles than teachers with naïve PCK.

Nevertheless, PCK does not stand without issues and critiques. First, there are issues of PCK concept *per se*. PCK is an elusive concept so that educational researchers provide a huge variety of interpretations. Because it was proposed nearly 30 years ago, the original idea of PCK does not reflect all of the new perspective of learning and instructions: teachers' assessment, metacognition, and professional determination based on experiences were omitted in the original concept. Second, the characteristics and identity of Korean language education make difficult to conceptualize PCK in a sophisticated way.

The suggest model provide a partial solution to remove the confusions and issues of PCK. By emphasizing the *knowledge transformation, adaptation, and reflection*, the new model of PCK allows us to understand that teacher knowledge is not static but dynamic and interactive. In terms of research implication, this model addresses that studying only PCK construct does not reveal the complex and interactive nature of PCK. In order to fully understand the PCK construct, researchers should be aware of the constructive mechanism of how PCK is developed, revised, and updated (knowledge transformation,

adaptation, and reflection). The proposed three processes are representative routes to understand dynamic nature of PCK. For the practical implication, teacher educator should modify their perspectives on teacher knowledge from a possession view of PCK (e.g., when a teacher has an adequate PCK, she or he will be a good teacher.) to a constructionist view of PCK (e.g., when a teacher can transform, adapt, and reflect their knowledge, the teacher becomes a better teacher.).

However, there are still untangled issues of PCK in Korean language education. One of them is to delineate SMK/PCK distinction in teacher knowledge in the domains of Korean language education. This issue is not just a problem in PCK studies or teacher education agenda in Korean language education. It may be more related to philosophical, political, and academic identity of Korean language education. What are essential knowledge, skills and strategies we want our teachers to teach and students to learn? Are they similar or different across the five domains (i.e., listening/speaking, reading, writing, literature, grammar) in Korean language education? Answering these questions will help us conceptualize core "knowledge" in Korean language education, which in turn contribute to investigation of "teacher knowledge" in a deeper level. Thus, the current discussion of PCK in this article is not the finalized construct. Rather, it remains open for further investigations. PCK is a continuously evolving construct to be refined.

I believe, as Dewey (1938), educational discussions will be not either-or approach. Theoretical understanding of teacher knowledge, including PCK should be further investigated, discussed, debated, and updated. The better understanding teacher knowledge and thereby successful professional development system in the field of Korean language education will be enabled after the ongoing academic efforts.

* Submitted: 2014.11.01.
first Revision Received: 2014.12.06.
Second Revision Received: 2014.12.19
Accepted: 2014.12.19.

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ABSTRACT

Pedagogical Content Knowledge in Korean Language Education

: Confusions, Issues, and a Tentative Solution

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This review revolves around pedagogical content knowledge (PCK) from Shulman's periods and contemporary contexts. Despite growing interest in PCK in Korean literacy education, there are still unresolved issues and confusion around the concept. As problematizing this concern, this paper aims to provide a tentative solution for the issues.

The PCK is a still useful framework that educational researchers and practitioner prefer to use because it overcomes the traditional dual professional systems: separate in-service teaching tracks of content and pedagogy. It also has scientific evidence that teachers with sophisticated PCK are better for teaching roles than teachers with naive PCK.

Nevertheless, PCK does not stand without issues and critiques. First, there are issues of PCK concept per se. PCK is an elusive concept so that educational researchers provide a variety of interpretations. Since it was proposed nearly 30 years ago, the idea of PCK did not reflect the new perspective of learning and instructions: teachers' assessment, metacognition, and professional determination were missed in the original concept. Second, the characteristics of Korean language education make difficult to conceptualize PCK in the domain of language use.

By emphasizing the knowledge transformation, adaptation, and reflection phases, a new model of PCK is proposed as a tentative solution to these issues. This model can capture dynamic, contextualized, interactive nature of teacher knowledge in the Korean language education.

KEYWORDS pedagogical content knowledge (PCK), professional development, Korean literacy education, teacher education

APPEDIX

The conceptualized teacher knowledge and PCK

Study	[Numbers of Categories] Constructs of Teacher Knowledge	Characteristic(s)
Shulman (1986)	[3] Subject matter content knowledge, pedagogical content knowledge, and curricular knowledge	The original discussion of PCK
Shulman (1987a)	[7] Content knowledge, General pedagogical knowledge, Curriculum knowledge, Pedagogical content knowledge, Knowledge for learners, Knowledge of educational context, and Knowledge of educational ends/ purpose/values	Extended categorization of his 1986 version. PCK is described special amalgam between content and pedagogy
Grossman (1988)	[4] Knowledge of students' understanding, Knowledge of curriculum, Knowledge of Instructional strategy, and Purpose for teaching	PCK is revealed as comparison marker between expert and novice English teachers
Marks (1991)	[4] Subject matter, students' understanding, Media for instruction (text and curriculum), and Instructional Process	PCK includes all four knowledge
Fennema & Franke (1992)	[4] Knowledge of mathematics (contents), Pedagogical Knowledge, Knowledge of learner's cognitions in mathematics (contents), Context specific knowledge	Addressed math educator. Teachers' Beliefs influence all the teacher knowledge. Context specific knowledge (PCK) as situated knowledge interplays with three other knowledge
Cochran, DeRuiter, & King (1993)	[5] Knowledge of subject matter, Knowledge of pedagogy, Knowledge of students, Knowledge of environmental context, Pedagogical content knowing	Since PCK seems static, they suggest Pedagogical Content Knowing (PCKg). PCKg is intersection between all other knowledge
Turner-Bisset (1999)	[12] Substantive subject knowledge, Syntactic subject knowledge, Beliefs about subject, Curriculum Knowledge, General Pedagogical Knowledge, Knowledge/models of teaching, Knowledge of learners: cognitive, Knowledge of learners: empirical, Knowledge of self, Knowledge of educational context, Knowledge of educational ends, Pedagogical content knowledge	PCK includes all other eleven knowledge. Every knowledge is analyzed in detail (too specific)

Banks, Leach, & Moon (1999)	[4] School knowledge, Subject Knowledge, Pedagogical Knowledge, and Personal subject construct	School knowledge is PCK. Personal knowledge of individual teachers is emphasized.
Barnet & Hudson (2001)	[4] Academic and research knowledge, Pedagogical content knowledge, Professional knowledge, and Classroom knowledge	Pedagogical context knowledge represents four sub-knowledge (including PCK).
Porter, Youngs, & Odden (2001)	[6] Subject-matter knowledge, Knowledge of students, The ability to engage students in active learning, Reflective practice, Pedagogical content knowledge, Professional commitment	Teacher knowledge, including PCK, is concerned with policies such as teacher licensure.
Myers (2003)	[5] Teacher knowledge of subject matter (the structure of the discipline), Teacher knowledge of teaching strategies (indirect and direct psychological process), Teacher knowledge of time management, Teacher knowledge of management of student variation, and Teacher knowledge of learning systems at the intersection of cognitive, subject and student variation	Addressed reading educator. PCK is not specifically described. Time management is suggested as important
NBPTS (2012)	[13] Knowledge of learners, Equity, fairness, and diversity, Learning environment, Instruction, Assessment, Reading, Writing, Listening/speaking, Viewing/visual literacy, Literacy across the curriculum, teacher as learner and reflective practitioner, Collaboration with families and communities, Professional responsibility	PCK is not specifically described. Standards for "English" (language arts) expert teachers
Snow, Griffin, & Burns (2005)	[5] Declarative knowledge, Situated procedural knowledge, Stable procedural knowledge, Expert/ adaptive knowledge, and Reflective/organized/ analyzed knowledge	PCK for reading teacher Teachers' knowledge acquiring step/stage is focused
International Reading Association (2008)	[6] Foundational Knowledge, Curriculum and instruction, Assessment and evaluation, Diversity, Literate environment, and Professional learning and leadership	PCK is not specifically described. Standards for professional development

Note: 〔#〕 means the number of the categorization of teacher knowledge