Collaborative Curriculum Development: A Tool for Change

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Professional development activities are often seen as an effective means of encouraging teachers to implement changes and alter their classroom practice. This paper presents an argument that conventional conceptions of professional development are inadequate for these purposes, and introduces Collaborative Curriculum Development as a means to overcome these deficiencies. The process of collaborative design is able to exert an influence on teachers' knowledge and beliefs as well as their classroom practices. The dialogic, interactive nature of the development process enables the sharing of knowledge between participants. This shared knowledge can act as a challenge to teachers' existing beliefs, leading to the generation of new knowledge and improved practice which then leads to improved learner outcomes. The creation or adaptation of materials provides a means to harmonize the realities of teachers' own contexts with the objectives of the reforms, allowing for a greater implementation of change.

Keywords: Teacher Development, Curriculum Development, Collaboration, Teacher Knowledge

Introduction

Renewal or revision of course curricula to meet the changing needs of learners or the requirements of governmental or institutional policies is a reality in the lives of teachers at all levels of the Japanese educational system. At the university level, there are broad efforts towards curriculum reforms which more closely meet perceived students' needs in a globalizing world (Ministry of Education, Culture, Sports, Science and Technology, 2017), as well as more localized attempts to provide students with broader perspectives on other cultures (e.g., Ostman, in print). At the same time, the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) has been promoting the new Course of Study in secondary education, including the principle that English language classes be taught in English, in an attempt provide students with greater opportunities to understand and express themselves in the language (AJET, 2011). In addition, MEXT policies for teachers at the primary level call for the "the promotion of innovative English education" (MEXT, 2003, p. 3) through the use of a variety of learning formats (MEXT, 2008) in order to improve students' ability to communicate in English.

One common point in all these efforts towards improving the quality of English education in Japan is a reliance on individual teachers for the successful implementation

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of the reforms through changed classroom practices. For this reason, the success or failure of these, and all such reforms and changes, "rests on the shoulders of teachers" (Huizinga, Handelzalts, Nieveen & Voogt, 2014, p. 33).

Teachers' actual day-to-day practices, however, have been found to be surprisingly stable and stubbornly resistant to change in the face of systematic reforms (Gorsuch, 2002). As Laskowski (2014) observes, "Seeking teacher change through formal policies designed by educational authorities is easier said than done, " (p. 120). One reason for this stability in the face of change is the role played by teachers' beliefs concerning the practices that are effective in encouraging student learning and the role these beliefs play in determining what gets implemented in their practice.

Teachers' beliefs have been seen as the single most influential factor on classroom instruction, and these attitudes take on even greater importance when reforms or changes in curriculum are implemented (Gorsuch, 2000). As Guskey (2002) points out, curriculum reforms and other educational initiatives most often fail due to the lack of change in teachers' beliefs. Put simply, for any proposed changes or reforms to be effective and take hold in the classroom, teachers themselves have to buy into the proposals, change their way of thinking about teaching and adopt new classroom practices.

This paper has three broad aims. Firstly, to briefly discuss the inadequacy of conventional professional development activities—"expert-driven one-shot workshops" (Mak & Pun, 2015, p. 4), seminars, conferences, and such—for encouraging the adoption of curriculum reforms due to their inability to develop teachers' knowledge or meaningfully alter their beliefs about what works in the classroom. Secondly, to suggest that one means of overcoming these deficiencies lies in teachers developing *knowledge of practice* (Cochran-Lytle & Smythe, 1999). Thirdly, to describe the process of collaborative curriculum development (CCD) as a means for teachers to accomplish the dual aims of professional development and the implementation of reforms, and examine the characteristics of the CCD process that encourage the generation of knowledge of practice.

Changing Beliefs through Professional Development

Professional development activities are often seen as an effective means of encouraging teachers to implement reforms. (Voogt, Pieters & Handelzalts, 2016). Conventionally, the aim of professional development activities has been to provide teachers with new knowledge that will assist them in implementing the reforms in their classrooms. The motivating conception behind such activities has been the conviction that this newly provided knowledge will act to alter teachers' beliefs, which in turn will motivate them to adopt the goals of the reforms and lead them to rethink their instructional practices to meet these goals.

As conventionally conceived, teacher development activities are based on the premise that the knowledge teachers need to alter their beliefs, and thus their practices, is best created by those outside of the classroom, such as university researchers or educational consultants. The primary purpose of professional development is to convey this knowledge to teachers.

The form of teacher knowledge that is the currency of traditional teacher development practices is what Cochran-Lytle and Smythe (1999) have termed *knowledge for practice*. This conception of knowledge is premised on the idea that

more knowledge (e.g., a greater understanding of educational theory, a better grasp of pedagogical schemes, a wider array of instructional strategies) leads to better classroom practice and thus more effective teaching. The knowledge is given to teachers as a set of guidelines or directions that they are then expected to implement in the classroom. In other words, a 'more knowledgeable other' gives the teacher the knowledge, which they subsequently put into practice. Underlying this premise is the supposition that the best-practices proffered up by outside experts reflect the most up-to-date knowledge, and that effective teachers employ the knowledge they receive in professional development experiences to implement reform (Cochran-Lytle & Smythe, 1999, p. 254-5).

While this conception of teacher knowledge remains a mainstay in professional development, there is widespread acceptance of the view that such activities are inadequate (Borko, 2004). This form of professional development is passive by its very nature, with teachers taken to be mere recipients of others' ideas and the executors of their plans. Changes and reforms, however, are not successful where teachers are regarded in this simplistic manner (Borko, 2004). Shifts in teachers' beliefs, their roles and their methods are essential for the successful implementation of many curriculum changes (Fullan, 2001, as cited in Handelzats, 2009, p.7). As mentioned above, teachers' beliefs are resilient, and as Guskey (2002) argues, most often they only change after teacher themselves have experienced the effectiveness of the proposed changes or reforms through improvements in student outcomes. These shifts in belief then lead teachers to more fully adopt new classroom practices that align with the goals of the reforms.

Moreover, conventional professional development activities are often seen as 'top-down' or 'one-size fits all' solutions (Laskowski, 2009), expressing a limited understanding of the realities that individual teachers face. The knowledge proffered to teachers in professional development activities often do not take into consideration the complexities and issues teachers face in their own classrooms (Fullan, 1991). As a result, teachers tend to ignore reforms that they do not feel match the realities of their contexts, learners and classrooms (Cohen & Spillane, 1992). This is another reason that conventional professional development activities fail to bring about "substantial and sustainable change," (Handelzalts, 2009, p. ix).

Laskowski (2009) calls for models of professional development that "take into account the complexities that teacher face," (p. 120), and notes that teachers themselves are the ones who are best able to identify pressing issues as well as the ones who are best able to find ways to solve them. He further remarks that teachers need to be given opportunities to take a more active role in their professional development. For the purpose of improving teachers' professional development, a shift in agency is required—a move "away from programs that focus on creating change in teachers" to activities that focus on "providing opportunities for active engagement, influencing teachers to take responsibility for their own learning and to reflect on their practice," (Drits-Esser & Stark, 2015, p. 1). What is needed is a different conception of professional development, one in which teachers themselves generate the kind of knowledge that can aid them in altering their beliefs and adopting new practices in order to achieve the successful implementation of reforms and curriculum changes.

Provided with opportunities to make sense of knowledge *for* practice in terms of their own students, classrooms and

educational contexts, teachers can begin to develop knowledge which is self-generated and situated in their practice. Rather than being passive receivers of knowledge *for* practice, teachers can to become generators of their own knowledge *of* practice (Cochran-Lytle & Smythe, 1999). To begin to generate the kind of knowledge that can help teachers alter their beliefs, teachers need to take their own classrooms and teaching contexts as the sites for the investigation of practice. They must treat the knowledge and theory produced by others as material for interrogation and interpretation. This can then become the basis for systematic inquiry into their own practice (Cochran-Lytle & Smythe, 1999, p. 250), not simply received wisdom.

This is the kind of knowledge that has the potential to become an integral part of their conceptions of teaching (Johnson, 1997, p. 780) and thus aid them in altering their beliefs about what leads to learning in the classroom. Widdowson (1984, 1990, 2003b) has repeatedly made the argument that teachers must engage with ideas and opinions received from experts, and appraise the applicability and consequences of such ideas in light of their own contexts through a process of mediation in order to generate knowledge. For this purpose, teachers must take a more active role in their own learning. They must undertake a process of determining the relevance of externally developed theories for their own practice, developing the means to put them into operation in their own classroom and evaluating the effects this has on the learning process. Working collaboratively with others in this process provides opportunities to examine their beliefs (Borko, 2004).

According to Cochran-Lytle and Smythe (1999), knowledge of practice emerges from a process of systematic inquiry into teaching, and learning, making classrooms and schools the sites for research, working collaboratively to understand curriculum, and most importantly "identifying and critiquing one's own experience" (p. 274). In this conception of teacher knowledge, knowledge received from or generated by experts becomes the basis for teachers to formulate their own answers—answers that fit their own contexts and that respond to the questions that motivated the creation of the knowledge in the first place. To develop knowledge of practice, teachers have to see their own schools and classrooms, rather than university halls, as centers of knowledge creation and focuses of research, and see their fellow teachers, rather than university professors or education experts, as their natural partners in research and exploration of the *puzzles* (Allwright, 2005) of classroom experience. Knowledge generated through a process such as this is the kind of knowledge that can alter beliefs, leading teachers to make fundamental changes in their practice, and thereby aid in the implementation of changes and reforms.

Collaborative Curriculum Development

One means of encouraging teachers to generate knowledge of practice, and one that has recently become the focus of greater research interest (e.g., Handlezalts, 2009; Huizinga, et al., 2014; Voogt, Westbroek, Handlezalts, Walraven, McKenney, Pieters, & DeVries, 2011) is collaborative curriculum development (CCD). CCD is seen as a way to combine the dual aims of teacher development, and curriculum reform and implementation in a single process (Voogt, Laferrière, Breuleux, Itow, Hickey, & McKenney, 2015). When carrying out CCD, teachers design new materials or adapt existing curriculum materials in collaboration with other teachers, usually with a focus on activities, lessons, modules or courses (Voogt, et al., 2011, p 1236). This process

may be initiated in response to institutional or national reforms and be focused primarily on the implementation of curriculum changes. However, it need not be, and the collaborative design process just as often takes the professional development of teachers as its principal objective (e.g., Drits-Esser & Stark, 2015; Voogt, et al., 2015)

The CCD Process

Figure 1 represents the two possible starting points for CCD and the relationship between curriculum development and teacher knowledge creation that comes out of the design process.

When the implementation of new curriculum is the intended outcome, the development of the materials is the primary goal, with teachers providing the necessary knowledge base for successful realization. Through a systematic process of analysis, design and implementation teachers work to redesign currently utilized materials or create new materials that help to bring the broad intentions of reforms in to harmony with the realities of the participating teachers' contexts (Voogt, et al., 2015).

When teacher development is seen to be the primary outcome of the CCD process, the production and implementation of classroom materials serves as the means of generating knowledge and encouraging teacher learning through the cycle of design, evaluation and reflection (Handlezats, 2009). The sustained and active engagement of teachers in the process of developing curriculum is an essential constituent of the learning, professional development and knowledge creation that comes out of the CCD process. Curriculum development activities lead to the generation of greater knowledge and development. This knowledge, professional development and newfound expertise in turn leads to further improved curriculum.

Conceptualized in this way, the CCD process can be seen as in some ways analogous to the methods of lesson study utilized in Japanese primary and secondary schools, as well as to the method of collaborative action research employed in some teacher education programs.

Voogt, et al. (2016) employ Gustafson's (2002) ADDIE model as an example of the core activities of the CCD process (Figure 2). While the model is a linear representation of the design process, it is more accurately conceived of as an iterative process, with each latter step feeding back into the former ones and generating renewed reflection on the questions and their proposed answers.

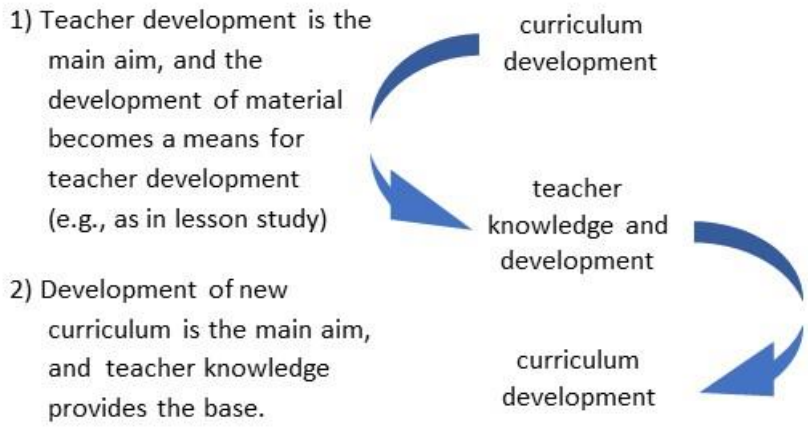

Figure 1. Two possible aims and two possible starting points for CCD

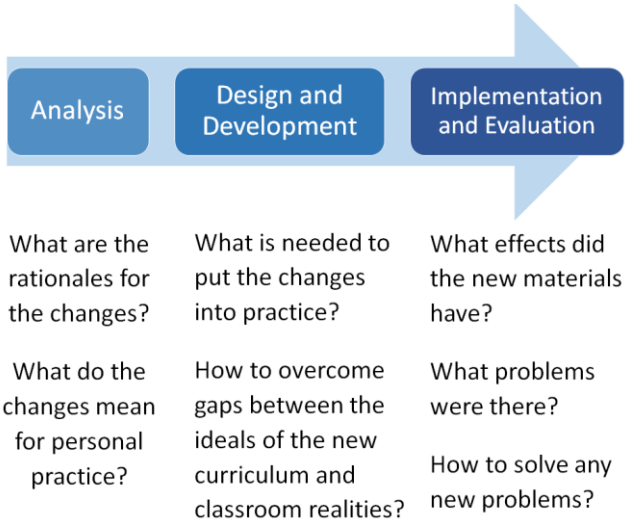

Figure 2. The ADDIE Design Process (Gustafson, 2002)

The initial stages of the process provide teachers with opportunities to consider, and come to grips with, the implications of the reforms for their classroom practices. Putting the newly designed materials into practice allows teachers to observe and reflect upon their effects on student learning. Through the process they can gain a better knowledge of the parts that make up a curriculum, leading to improved design practices and a higher quality curriculum. Teachers are also provided with opportunities to improve their instructional practices through a better understanding of the effects the design process has on classroom practice.

CCD and Knowledge of Practice

The CCD process described above incorporates four mechanisms which aid in the generation of knowledge of practice: its cyclical nature, situatedness, provision of agency (Voogt, et al., 2016) and collaboration with peers (Borko, 2004).

The iterative nature of the CCD process described above mirrors the cyclical nature of learning in general, and active engagement with a focus on content, pedagogy and local context are crucial for teacher learning (Voogt, et al., 2016). Such learning is more effective when it is situated in meaningful contexts, when learners are actively engaged in their own learning process, and when they collaborate with others (Voogt, et al., 2011). The adaptation of materials through a process of collaborative design offers ample opportunities for learning (Voogt, et al., 2015). The CCD process resembles the steps of Engestrom's (2006) model of "expansive learning" – questioning, analyzing, examining, implementing and reflecting (as cited in Voogt, et al., 2015, p. 262). Each of the steps involved in the CCD process as described above furnish affordances for teacher learning, which in turn enable the generation of knowledge of practice. When teachers engage in CCD, the processes of curriculum development and professional development interact leading to the generation of greater knowledge and development. This knowledge and newfound expertise leads to a more improved curriculum, which in turn helps to consolidate the changes in teachers' classroom practices. The experience of successfully implementing a new curriculum and observing its effects on student outcomes can lead to a change in teachers' beliefs (Guskey, 2002).

The opportunities for learning and knowledge creation found in the CCD process come about "in part because they are so closely connected with everyday

teaching realities and call on their abilities to solve the problems and challenges they face" (Voogt, et al., 2015, p. 262). The situated nature of CCD—the notion that the issues teachers are focused on, try to solve, and learn from are based in their own classrooms—is another of the mechanisms that aids in the development of teachers' knowledge of practice. Through the development process, teachers are not only exposed to new knowledge and practices, but they work to "shape" these to fit their own contexts (Voogt, et al., 2015, p. 260). The process of collaborative design, when grounded in teachers' contexts and tied to existing curriculum, is able to exert an influence on teachers' knowledge and beliefs as well as their classroom practices. By applying their present knowledge to issues that are closely tied to their everyday reality, they are able to expand that knowledge by solving the problems and challenges found in their classrooms.

As noted above, to develop knowledge of practice, teachers need to take responsibility for their learning (Drits-Esser & Stark, 2015, p. 1). The knowledge of practice conception places a strong degree of emphasis on the "teacher as agent and of teaching as agency in the classroom" (Cochran-Lytle & Smythe, 1999, p. 276). This sense of agency is one further knowledge development mechanism found in CCD. When involved in CCD, the need for change comes from teachers' own practice and teachers retain some control over how such changes are implemented. As Huizinga, et al., (2014) point out, the successful implementation of reforms depends on teachers' ownership of the reforms, and an active involvement in the design process provides a number of opportunities for this. Teachers must discuss areas of similarity and differences between the new and the old curriculum (Voogt, et al., 2015), as well as reflect on the purpose and implications of the changes (Voogt, et al., 2016). Teachers' active engagement in the process enables a greater sense of both ownership over the curriculum as well as individual agency. This kind of engagement—with a focus on curriculum, classroom practice and local context over an extended period, such as occurs in the repeated cycles of the CCD process—is essential for the growth of teacher knowledge (Fishman, et al., 2013; Garet, et al., 2001, as cited in Voogt, et al., 2015, p. 262) In this way, CCD represents the shift in agency that Drits-Esser & Stark (2015) call for – away from externally prescribed solutions to autonomously self-generated ones – by providing opportunities for teachers to take responsibility for their learning and reflect on their practice in collaboration with peers.

Working in collaboration with other teachers may be the most important mechanism for the development of knowledge of practice in the CDD process. Cochran-Lytle and Smythe (1999) argue that a central tenet of the knowledge of practice conception is teachers "working together to investigate their own assumptions, their own teaching, and curriculum development" (p. 279). The dialogic, interactive nature of the development process enables the sharing of knowledge between participants. In CCD, teachers share knowledge, exchange perspectives and tap into each other's expertise (Voogt, et al., 2015).

Voogt, et al., (2016), in their review of studies on the CCD process, found that teacher learning came directly out of the collaborative process. In working to find solutions to issues that arose during the design process, teachers engage in a process of brainstorming, refining ideas, reasoning and justification. The actions of reasoning and justification, in particular, provide opportunities for learning and

knowledge creation. Providing rationales for why they believe a particular solution would solve a problem, requires teachers to reflect on their own practice and make their reasoning explicit, in order to convince their peers, and this leads the sharing of knowledge and expertise, the exchanging ideas and points of view, which encourages the co-construction of new knowledge (Voogt, et al., 2016). Teachers' opinions and reflections come out of their own knowledge and beliefs, but the interaction with peers provides opportunities to challenge their own beliefs and reflections (Borko, 2004). Teachers questioning their own assumptions, while exploring others' perspectives and practices is essential in the development of knowledge of practice (Cochran-Lytle and Smythe, 1999).

Conclusion

This paper has argued that CCD represents an alternative to conventional notions and practices of professional development, as well as a means to help overcome deficiencies in the implementation of curriculum reforms. It does this by encouraging teachers to alter their beliefs through the generation of knowledge of practice.

The process of collaborative design, when grounded in teachers' contexts and tied to existing curriculum, is able to exert an influence on teachers' knowledge and beliefs as well as their classroom practices. Teachers benefit from their active engagement in the design process, a willingness to learn from others and the situated nature of the learning, i.e., it is taking place in a context that is meaningful to them (Voogt, et al., 2015, p. 261). The dialogic, interactive nature of the development process enables the sharing of knowledge between participants. This shared knowledge can act as a challenge to teacher's existing beliefs, leading to the generation of new knowledge and improved practice which then leads to improved learner outcomes.

This kind of process, where teachers can come to understand the shape of the reforms, develop rationales for the proposed changes and position themselves as agents of that change, also makes the classroom implementation of the new materials easier with greater implementation of the curriculum in practice (Voogt, et al., 2016). The creation or adaptation of materials provides a means to harmonize the realities of teachers' own contexts with the objectives of the reforms, allowing for a greater implementation of change. Putting the new materials and new practices that come out the design process into practice, provides opportunities for teachers to observe the effects of the materials in the classroom and reflect on learning outcomes, again leading to the generation of new knowledge and development, refined in collaborative dialogue with others, which the feeds back into the process. This allows teachers to work to overcome gaps between the ideals of the new curriculum and their classroom realities. CCD can thus be seen as a way to effectively combine the professional development of teachers together with curriculum reform and become a tool for change in both realms.

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