Background: The terms culturally and linguistically complex classrooms describes the learning environments that are created when previously segregated groups come together so that there are two or more cultural or linguistic groups in the educational context. Low income, culturally, and linguistically diverse students often experience low academic achievement, high drop out rates, and low college graduation rates in these classrooms, with one contributing factor being the disconnect between the background of the students and the teachers who teach them. Many of the teachers assigned to teach diverse students in urban schools lack confidence in their ability to do well in diverse classroom settings, feel uncomfortable interacting with parents from diverse backgrounds, feel inadequately prepared to teach diverse students, and prefer not to be placed in situations where they feel uncomfortable and inadequate.

> *Generativity* refers to a teachers' ability to continually add to their understanding by connecting their personal and professional knowledge with the knowledge they gain from their students in order to produce or originate new knowledge that is useful to them in pedagogical problem solving and in meeting the educational needs of their students.

Study Procedures: Professor Ball examined longitudinal data from 1994-2005 focused on teacher professional development in the United States and South Africa, looking at 1) the process of teacher change while participating in a professional development course and 2) teachers' continued learning and their changing practices after the course ended.
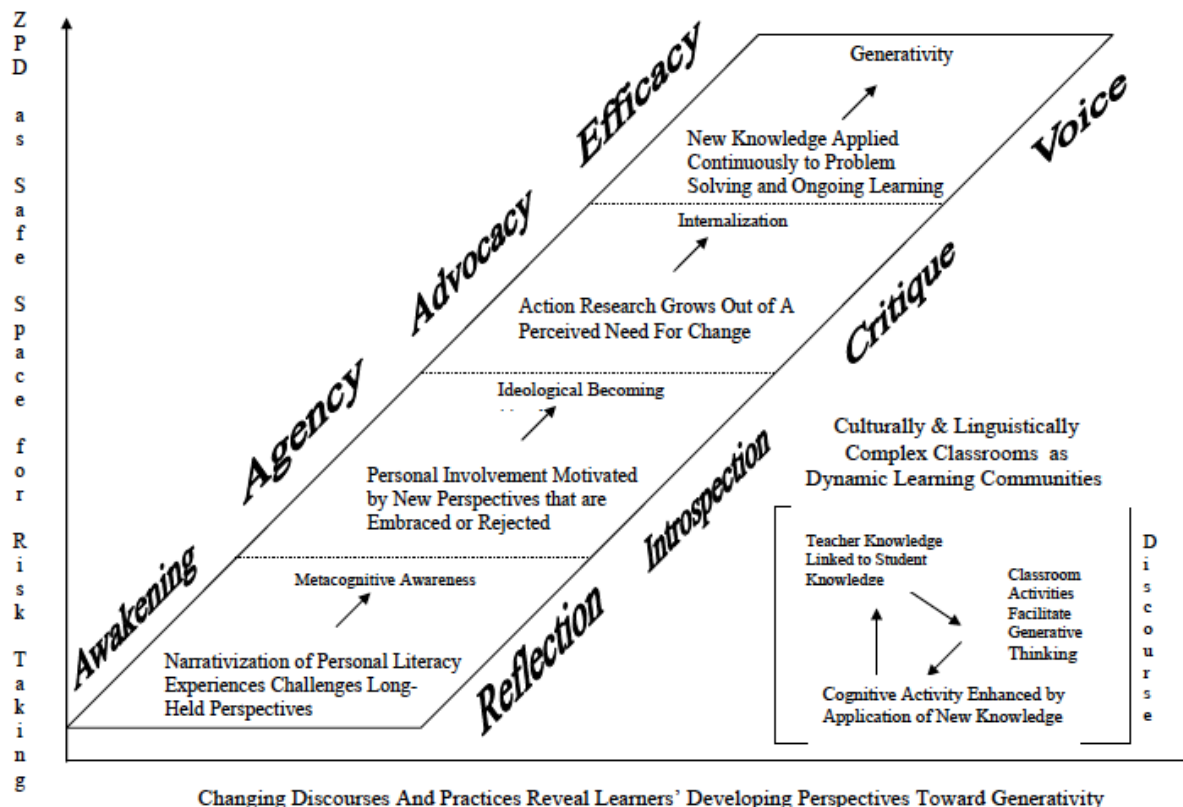
Student Framework: In order to address the cycle of student underachievement we must increase teachers' knowledge of theory and best practices and increase their knowledge of students' cultural and linguistic practices and values. Following and awakening stage, we must give teachers feelings of agency and advocacy, as well as a teacher's sense of self efficacy. Ball uses this four-fold theoretical framework to drive her research:

- Teachers with high levels of <u>metacognitive awareness</u> can help themselves identify their own barriers to learning, change the strategies they are using to attain their goals, and modify their teaching and learning strategies based on awareness of their effectiveness;
- Teachers must be given an opportunity for <u>ideological becoming</u>, that is the coming together of new perspectives, new ideas, and new voices as an essential component to a person's growth;
- Teacher learning must involve <u>internalization</u> meaning learning occurs in a social plane and internal plane, and efficacy;
- Teachers must have <u>self-efficacy</u> or the belief in their potential ability to affect positive change in the lives of students.

Drawing on her Model of Generative Change, current research in the US, South Africa, NZ, & Australia provides direction for preparing teachers for diversity transnationally. *See definition of Generativity in the box above.*

Model of Generative Change

Figure 1. The processes through which teachers and students develop voice, generativity, and efficacy in their thinking and practice.

From Ball, 2009

Based on her ongoing research and analysis, Ball translated her professional development instructional approach into the framework in Figure 1 titled, "Model of Generative Change." The model depicts the strategic use of language – and in particular the use of writing as a pedagogical tool for reflection, introspection, and critique – within professional development and subsequently in teachers' classrooms. Teachers' new knowledge is linked to student knowledge on an on-going basis, and then classroom activities are designed to facilitate generative thinking and problem solving on the part of both teachers and students alike. Here are the four elements of the framework described in short:

1) The process of "generative change" starts with teachers' metacognitive awareness developed by having teachers write about their personal literacies, the literacies of others & emergence of critical literacies.
2) Then, ideological becoming stems from teachers and subsequently their students looking at their own role within the teacher/learning community as they pertain to diversity and literacy.
3) Next, the professional development focused on internalization through critiques of course readings and through the analysis of action research projects they select to increase their own advocacy.
4) The final phase is where generativity takes place as teachers continue to write about and discuss their opportunities, challenges, and perceived need for change. They become agents of change as they develop a sense of voice and begin to implement their action plans.