

The development of scientific literacies with English Language Learners: The INA-QTEL Collaboration

The National Academies National Research Council Board
on Science Education



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In order to support ambitious student learning, teachers need to be provided with opportunities to:

- Deepen their subject matter knowledge
- Grow their subject matter pedagogical expertise –for the simultaneous development of conceptual, academic, and linguistic student expertise
- Become critical users and designers of curricula that is situated in the particular needs of their classes
- Participate in communities of teachers as learners



English Language Learners at INA and all around the country:

- Take to school an immense potential
- Our role as educators is to grow that potential through apprenticeship processes that work beyond their level of autonomy and both challenge and support students in their gradual appropriation of practices
- We call our approach “a pedagogy of promise” because it looks at students proleptically
- Scaffolding is the center piece of our work

Two key elements in scaffolding



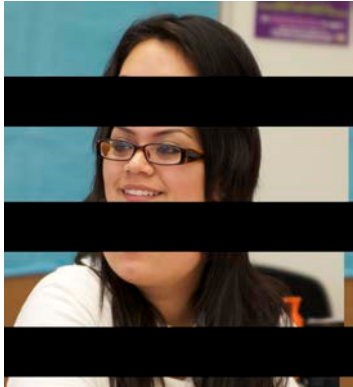
Conventionalized, ritual **structure** (constant and flexible): teachers scaffold as they prepare tasks for their students, know what they are good for, decide when they are appropriate, how they connect to each other

An interactional **process**, jointly constructed from moment to moment: teachers scaffold as they support students' interactions, students learn to scaffold for themselves and others

The process is enabled by the scaffolding structure, and a constant evaluation of the process indicates when parts of the scaffolding structure can be dismantled or shifted elsewhere (Walqui & van Lier, 2010)

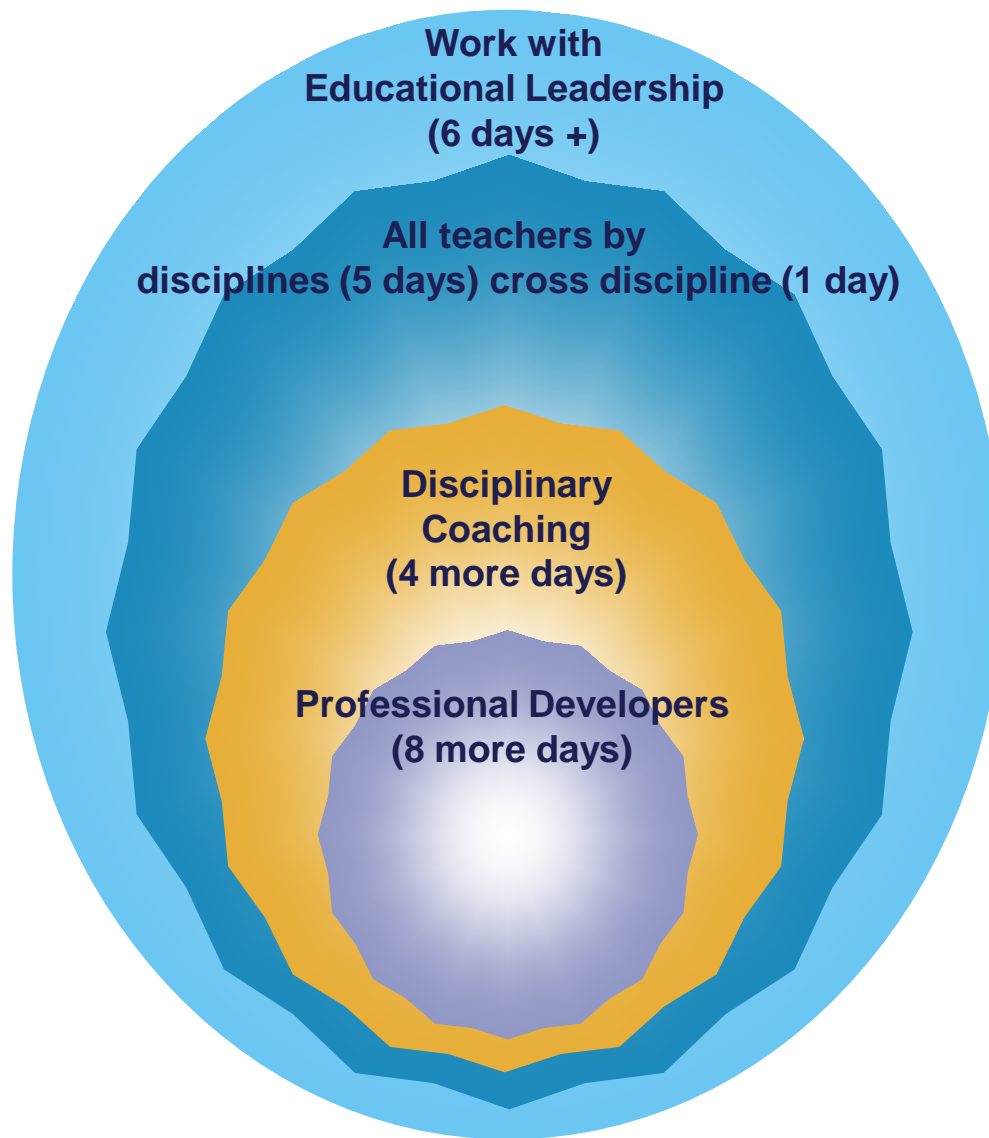
The Professional Development Program at INA

- is long-term, sustained, and intensive: it involves all educators at INA for three years of apprenticeship
- is theoretically driven and in turn helps us build theory
- is conducted in the disciplines
- presents a portfolio of opportunities for the development of educator expertise, with both taking over and handing over of responsibilities over time
- is multi-layered



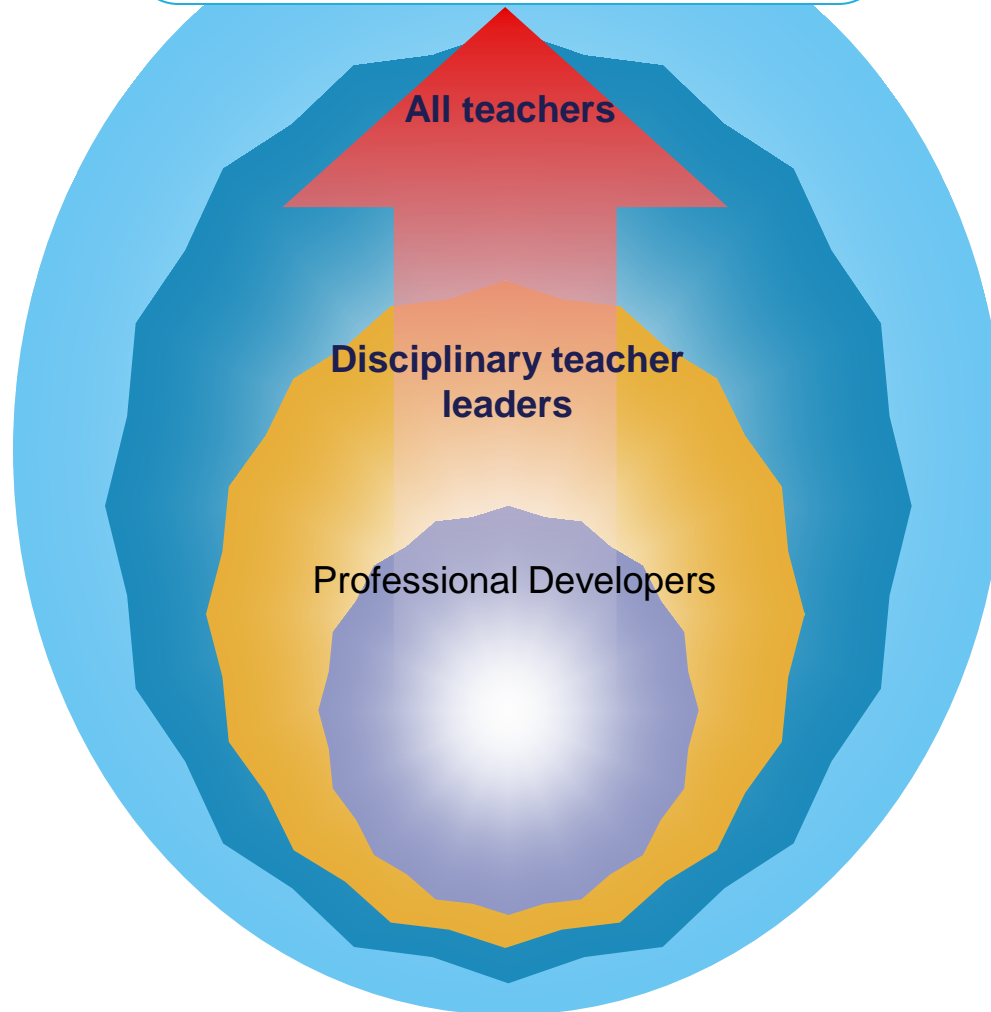
At the heart of our approach

- Students learn disciplinary concepts, the practices of the discipline, and the language needed as a result of invitations to participate in deliberately designed activity that supports their apprenticeship
- What the child can do with support and in collaboration today, he will be able to do alone tomorrow
- Along the process, approximations –if conceptually correct- need to be valued



INA: A Nested Model of Professional Development

Whole School Improvement



Building INA educator expertise

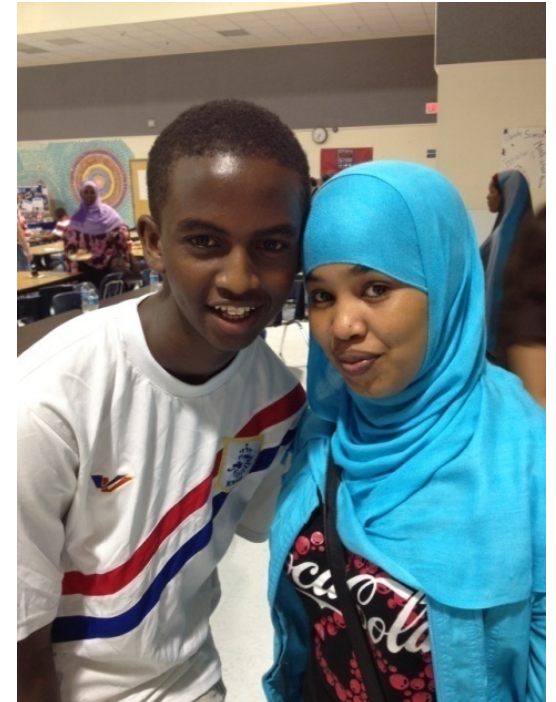
International Newcomer Academy

Fort Worth, Texas

Who we are:

Over 300 students from 35 different countries

50% - 60% Spanish speaking students; 25 other languages spoken



QTEL's Work with INA Teachers

Exemplar lessons that engage teachers in collaborative tasks

Readings and reflective discussions

Coaching cycles, both individual and then in groups with 3-4 teachers per department



Video Clip

Four lenses for your viewing:

- intersubjectivity
- intellectual stamina (and appropriation)
- language use: structure and process
- the emergence of student voice