



Figure 1: A Teaching Concept Map: Each region represents a domain of teaching practice. The white regions represent processes that students exhibit. Other regions primarily represent considerations of teachers about teaching practices. The arrangement of the regions in this concept map represents my view of how these domains are integrated in thinking about teaching.

## Teaching Statement

The diagram in Figure 1 is a concept map of the twelve major domains of thinking discussed during my teacher training program. It represents my own view of how these domains are integrated in thinking about teaching practices. This view is summarized in the following paragraph, and its main ideas are developed in the rest of this statement.

A central process in education involves teachers and students communicating to build understanding. Communication in a classroom is responsive to student individuality, and it is regulated by a set of norms that teachers develop with students for the purposes of education. This development involves deliberation and negotiation among teachers and students to establish the patterns of instruction and assessment in the classroom. Thinking about educative norms for communication, instruction, and assessment are interdependent with thinking about curriculum, and how to motivate student participation. Finally, all of these considerations and processes are integrated within a community and a larger society, which are subjects of reflection by students and teachers alike.

Education philosophers have expressed in various ways the importance of developing self-directed learners. To make this notion distinct, I am adopting the use of the verb “to student” from work by the education philosopher Gary Fenstermacher. I believe that the role of a teacher is to enable students not just to learn, but *to student*: to help themselves learn. To student is to work intentionally toward learning goals by actively inquiring to develop understanding. When

studenting, students take initiative to direct and develop their processes of communicating, understanding, and reflecting (represented by the white areas in Figure 1). Thinking of teaching as the work of promoting studenting directs me to think intentionally about how to develop and establish norms that support studenting.

The main studenting process which is directly observable is communication. Communication norms are established patterns of communication that reflect student accountability for their manner of communicating. To develop accountability, communities need caring relationships and awareness of how one's actions affect another. Teachers can support the development of accountability by modeling deliberation about community concerns with patience, integrity, and self-awareness. Teachers can also promote accountability by codifying norms in the form of expectations, ensuring that students understand the expectations, and consistently holding students accountable.

Some of the key educational goals and norms that I bring to any classroom involve supporting teamwork, problem solving, organization, diligence, and facility with the practices of one or more academic disciplines. The eight mathematical practices, an important set of norms codified for math teachers by the National Council of Teachers of Mathematics (NCTM), subsume all of the goals that I have mentioned. One important mathematical practice, according to the NCTM, is to construct viable arguments and critique the reasoning of others. Consensus-building through mathematical discourse builds students' sense of connectedness with other thinkers. I experienced this most profoundly as a college student when the Indiana University Mathematics Club would meet to train for math competitions. We built a strong sense of group cohesiveness by working out and sharing our solutions to past competition problems. Another mathematical practice, which also relates to our connectedness, is to look for and make use of structure. The capacity to develop consensus in mathematics indicates that we are connected by an inherent structure common to our individual experiences. Some of the structures of particular mathematical interest to me are the structures inherent in natural history, including the tree of life and the ecological conditions that have shaped it. Studying these structures contributes to a greater appreciation for biodiversity and a concern for the rapidly developing human relationship with Earth's ecosystems. The relationship between understanding and the concerns of communities and societies is represented by their shared boundaries in Figure 1. This relationship indicates that an important component of studenting is to examine how the norms that have been developed in a classroom can impact people's lives.

In the mathematical modeling course at the Center for Talented Youth, my students used mathematics to develop plans for colonizing Mars. They applied a wide repertoire of knowledge and skills to innovate and address challenges inherent to space travel. They also expressed themselves artistically and ethically through the designs of their spacecrafts and the constitution of their colonial governments. The application of mathematics within such realistically con-

textualized tasks supports students to impact their communities and society intellectually, morally, artistically, and technologically. A more diverse way of thinking than the practices of a single discipline, is essential to develop norms to address complex ideas that impact the lives of people. These norms are developed and impacted through student reflection. Reflection is often tied to meaningful subjective experiences, so norms for reflection that involve active engagement with communities and cultures are needed to support studenting in this area.

The Concordia Language Villages provides opportunities for its students, or villagers, to experience transformative perspectives on issues that profoundly affect people's lives. Activities are set in the context of a village, representing a particular nation or a cultural and linguistic identity. Having adopted this cultural identity, villagers have many opportunities to participate in a range of informal, structured, and programmed activities. A few of the programmed activities simulate special events or processes in society: events like historical migrations and processes like deliberation at the United Nations. These programs enable villagers to apply their capabilities and interact in simulated situations where they can experience the complex consequences of their actions. These experiences often provoke strong feelings and concerned thinking about moral and ethical issues. Following these experiences, facilitators guide students to reflect by relinquishing their simulated identities and engaging in conversation about their experiences. This mode of facilitation is supported by a norm of openness and tolerance to the various ways that students express their ideas and feelings. This practice sometimes conveys the sense that even the teachers do not have all the answers.

The model presented here represents one way to frame thinking about teaching. However, being able to frame thinking in this way does not make one a good teacher. The utility of this model is to point to processes that are important in the practice of teaching. Developing the actual processes successfully requires a different set of attitudes and dispositions. Among the attitudes and dispositions that are important is humility. To teach is to have a conversation with a orientation to be of service to someone. Good teachers are those who have carefully thought about what they want to say. A teacher delivers a message hoping, but not presuming, that it will serve another person. Then a teacher changes roles and becomes a listener.

Promoting studenting is an essential goal of teaching. Achieving this goal requires developmentally-appropriate behavioral and academic norms. Norms for communication are critical and must be developed through self-awareness and careful attention to relationships. The mathematical practices, as codified by the National Council of Teachers of Mathematics, provide a set of worthwhile academic norms to support mathematical understanding. Realistically contextualized performance tasks are essential to promote the repertoire of skills and knowledge students needed to transfer their understanding in ways that will impact their communities and society. Students' understandings of themselves

and others are profoundly transformed when they have opportunities to experience life through new perspectives and reflect about the impacts of their choices. Teaching to support studenting involves a balance of reflectively thinking about teaching practices and carefully conducting conversations with students.