## Future Goals: Reimagining Teaching with Innovation and Technology Lisa Harrison Piane, 2017

As I reflect on my first year as a Computer Science (CS) Teacher and a Technology Integration Specialist and complete the Master of Arts in Educational Technology (MAET) program, I look toward the future with new professional learning goals. My school is beginning to reimagine teaching and learning as they consider a vision for innovation and educational technology. We have a new makerspace, every classroom has a set of iPads and we are exploring ways to introduce computational thinking skills to students as young as age 3. My future goals are focused on three topics of study that support this vision: 1) helping teachers incorporate computational thinking practices into their curricula, 2) developing my knowledge of basic CS skills and principles, and 3) increasing my understanding of what it means to be a teacher leader in the contexts of my new roles.

Computational thinking (CT) is usually equated with computer science or programming. It is, however, much more than that. Jeannette Wing describes CT as "a way of solving problems, designing systems, and understanding human behavior by drawing on the concepts of computer science" (Wing, 2006, p. 33). In our technology-driven world, CT skills can benefit students beyond the computer science classroom. Many teachers already incorporate CT skills into their lessons by teaching students how to break problems into smaller steps, logically organize and analyze data, think critically, collaborate, communicate, work with open ended problems, and learn to problem solve with persistence and flexibility. I want to learn more about the place of CT in the early childhood classroom and how I can support teachers in developing and identifying CT skills across grade levels and subjects. I will explore the work of Marina Umaschi Bers in her book, Coding as a Playground Programming and Computational Thinking in the Early Childhood Classroom. I would like to pursue also the MAET graduate certificate in creative computing if it becomes available.

This year as a computer science (CS) teacher was filled with experimentation, growth and reflection as I developed curriculum, structured classroom routines and expectations, and implemented new digital tools. As a former homeroom teacher, I had expert knowledge of my students' developmental and learning needs, and I understood good pedagogy and classroom management. However, I was not trained in CS education and found myself learning alongside my students. Although I still have a lot to learn, I have a better understanding of what is needed to design meaningful CS learning experiences. To develop a greater understanding of CS skills and principles, I will familiarize myself with the resources in the K-12 Computer Science Framework. This will inform my work as I design curriculum and a create a continuum of skills across grade levels. I will also be an active learner in code.org's self-paced online course entitled Teaching Computer Science Fundamentals as I explore basic CS skills and best teaching practices. It will help me to develop my CS content knowledge so I can align it with technology and pedagogy using

the <u>Technological Pedagogical Content Knowledge</u> (TPACK) framework. This course will also help me to build my professional learning network as I connect with fellow educators who are teaching coding in their classrooms.

Over the years I have served in many faculty leadership roles. MAET coursework introduced me to effective leadership styles and approaches that have influenced my role as a teacher leader. Because of my knowledge and skill with educational technology and as a Technology Integration Specialist, I am also seen as a school technology leader. I would like to learn more about leadership as it relates directly to technology and innovation. I hope to affect positive change as my school begins to craft a vision for educational technology integration and a professional development model to support to teachers as they use technology in their classrooms. To achieve these goals, <a href="EducationTechnology Leadership Program">Education Technology Leadership Program</a> will provide me with a "greater understanding of leadership around emerging technologies, a deeper understanding of effective technology integration, and an action plan for leading change" (EdTechTeacher Program).

Professional growth is an integral part of my ongoing aspiration to be a better educator. Learning goals evolve and change as I am introduced to new challenges, knowledge and experiences. My current goals for future learning are tied to my new roles as a CS Teacher and Technology Integration Specialist. I am eager to explore and study computational thinking, CS principles, and teacher leadership that promotes innovation and technology as my school reimagines learning and teaching.

## References

Leadership in Innovation - EdTechTeacher Program.pdf. (n.d.). Retrieved July 24, 2017, from <a href="https://drive.google.com/file/d/0B8JfEN2mQos2S05|TUp1XzBQWTg/view">https://drive.google.com/file/d/0B8JfEN2mQos2S05|TUp1XzBQWTg/view</a>

Wing, J. (2006). Computational thinking. New York: ACM. doi:10.1145/1118178.1118215