

Digital Media and Learning: Learn, Make, Play Summer Institute for Teachers

Instructor: Dr. Mete Akcaoglu

Location: Innovation Studio, COE 3157, Georgia Southern University

Dates: June 5 – 9, 2016 (Monday – Friday)

Time: 9am – 4pm

Format: Face-to-Face

Contact: makcaoglu@georgiasouthern.edu

Web site: tba



GEORGIA SOUTHERN UNIVERSITY

Why DML?

There is a growing need and push for STEM education and careers in Georgia, as evidenced by the *Governor's High Demand Career Initiative Report*. According to the report, STEM career fields need to be introduced to the students when they are young. While jobs in the STEM fields appear on the top of the "high-demand jobs list," soft skills such as analytical thinking, problem-solving, and teamwork are also highlighted. Despite the need, there is a lack of resources and opportunities, especially in the southern, rural parts of the state, where no schools provide education in advanced placement (AP) computer science.

In line with Bulloch county *2020 Bulloch County Schools Strategic Plan*, the DML Summer Institute will help teachers to provide relevant real-world experiences (i.e., career-readiness), use new and existing technologies to support instruction and increase teaching effectiveness, and engage in professional development for professional growth and to become a part of a professional learning network.

Designing technology-rich and engaging learning environments that target teaching of STEM skills to young students requires knowledge of instructional design and technology. This process of planning needs to be based on theory, grounded in evidence, and focused on learning outcomes. It requires bringing together theories, pedagogies, and technologies into the mix.

Through the DML Summer Institute, Drs. Mete Akcaoglu and Eunbae Lee, Assistant Professors at Georgia Southern University, will guide the participants in designing technology-rich environments that will prepare K-12 students for STEM careers.

Course Description and Objectives

We invite P-12 teachers to participate in this one weeklong face-to-face professional development workshop at the Innovation Studio in the College of Education at Georgia Southern University. The goal of the DML Summer Institute is to prepare educators to design and develop learning experiences using cutting-edge technologies. The technologies will include 3D printing, robotics, electronics, coding, game and app design. Through hands-on experience with these technologies, teachers will explore ways to integrate them into their curricula.

More specifically, our program targets the following learning outcomes:

- Explore a variety of cutting edge technologies with regards to STEM skills
- Discuss implications of technology in the classroom
- Discuss ways to scaffold students' thinking and computer programming skills.
- Evaluate technologies to promote problem solving and analytical thinking skills
- Select and use appropriate technologies to achieve learning objectives
- Collaborate with colleagues in design, development, and evaluation of instruction
- Compile and create resources for future references (i.e., Handbook of Cutting Edge Technologies for K-12).

Readings

We will provide readings during the workshop. No textbook is required. The following foundational readings will prepare the participants with some background knowledge in problem solving, technology integration, and theoretical underpinnings of constructionism:

- Papert, S., & Harel, I. (1991). *Situating constructionism*. *Constructionism*, 36, 1-11.
- Jonassen, D. H. (2000). Toward a design theory of problem solving. *Educational Technology Research and Development*, 48(4), 63–85.
- Mishra, P., & Koehler, M. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *The Teachers College Record*, 108(6), 1017-1054.

We will also read practitioner-oriented articles to discuss implications of using specific technologies in the classroom.

Schedule

Day	Topic	Activity
1	Problem solving, TPACK, Constructionism 3D Printing	Welcome & Scavenger Hunt Course Overview (coffee & chat) How it works?
		Cool Tools (Adobe Voice, Slate) Design & Play
2	Robotics	Robotics (Lego Mindstorms, resources) Coffee & Chat Grant writing
		Cool Tools (students share) Design & Play
3	Game Design and Coding	Games, Game Design & Coding Coffee & Chat Grant writing
		Cool Tools (students share) Design & Play
4	Electronics	Electronics Coffee & Chat Grant writing
		Cool Tools (students share) Mini Design
5	Multimedia	Multimedia design and development Coffee & Chat Grant writing
		Cool Tools (students share) Mini Design
		Closing Share e-book with everyone Professional Learning Network

There will be lunch breaks from 12-1. BYOL (Bring your own lunch)

About the Instructors

Mete Akcaoglu is an Assistant Professor of Instructional Technology in the Leadership, Technology, and Human Development Department at Georgia Southern University. He earned his Ph.D. in Educational Psychology and Educational Technology from Michigan State University in 2013. His research focuses on designing innovative and technology-rich learning environments to teach young children important higher-order thinking skills. A recent example of this work is Game Design and Learning (GDL) courses that I initiated and ran in both the US and Istanbul, Turkey. Currently, He is teaching Educational Psychology and Instructional Technology courses at the online Instructional Technology master's program at Georgia Southern University. More information can be found at <http://www.meteakcaoglu.com>.

