



LOYOLA UNIVERSITY CHICAGO

Preparing people to lead extraordinary lives

Teaching, Learning, and Leading with Schools and Communities
School of Education, Loyola University
Chicago Fall Semester 2016

TLSC 231: Teaching Science & Writing in Elementary Classrooms

Instructor Information
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Days & Times: Thursdays 8:15-11:45am

Partner Sites: Goudy Elementary School, Peggy Notebaert Nature Museum, Chicago
Children's Museum

Module Description

One way to think about teaching science is to understand science as a culture. People who are scientifically literate can talk, think, act, and identify within the community of science. They understand the beliefs, ways of knowing, and central assumptions that constitute science. They understand how science is constructed, communicated, and used. We will spend our time together exploring what it means to learn and do science and engineering in different contexts. We will also reflect upon the possible implications for teaching science and engineering and for creating opportunities for all students to participate in the culture of science.

IDEA Objectives

During this module, through large and small group instruction and discussion, hands-on learning experiences, fieldwork, and reflection, you will work toward the following *essential* instructional objectives:

- Gaining a broader understanding and appreciation of science as an intellectual and cultural activity
- Learning how to find and use resources for answering questions or solving problems

You will also work toward the following *important* instructional objectives:

- Developing specific skills, competencies, and points of view needed by teaching professionals
- Learning to apply course material in the classroom setting

Essential Questions:

- How are science, technology and engineering related; how are they distinct?
- How have the *Framework for K-12 Science Education* and the Next Generation Science Standards (NGSS) impacted science and engineering education?
- What is scientific argumentation, and how do teachers teach students to draft arguments based on specific evidence from and across texts?
- How and why can teachers meet the needs diverse learners through acknowledging and building upon their prior experiences, beliefs and values?
- How do teachers integrate, support and assess practical and purposeful writing within literacy and discipline specific contexts?
- How are teachers in discipline specific contexts addressing new standards for writing?
- How might informal learning resources support and enhance science and engineering curricula, as well as provide relevancy to student's learning?

Essential Understandings, Knowledge and Skills:

EU 3 Candidates will understand that effective educators use research and evidence-based practices to design instruction that includes the alignment of goals, objectives, assessments and instructional strategies to meet the individual needs of students. Candidates will:

- EU3 K1 Identify what constitutes research and evidence-based practices related to designing and implementing instruction. (c1G) (IB)
- EU3 K2 Explain the scope and sequence in relevant standards (NGSS, CCSS). (c1A)
- EU3 K3 Explain how to adjust scope and sequence in standards-based curriculum maps to meet the needs of diverse learners. (c1A) (IB)
- EU3 S1 Consult academic texts or journals to read current research on designing instruction (i1A) (IB)
- EU 3 S2 Incorporate research and evidence-based practices into the design of instruction. (e2K, i1A) (IB)
- EU3 S3 Use standards-based curriculum maps to design units and lessons to meet the needs of diverse learners. (c2J, c2B) (IB)
- EU 3 S8 Select relevant instructional content, materials, resources and strategies for differentiated, universally designed instruction and sheltered instruction. (c2J, e2G) (IB)

EU 6 Candidates will understand that effective educators apply deep understanding of both content and pedagogy to provide developmentally appropriate instruction to all students.

Candidates will:

- EU6 K1 Describe the important facts and central concepts, principles, and theories associated with their certified content areas. (b1B, b1G)
- EU6 K2 Identify the content standards and the scope and sequence of the subject area of their certified content areas. (b1B)

- EU6 K3 Describe how their subject is related to other disciplines. (b1D) (IB)
- EU6 K7 Describe content-specific instructional strategies.
- EU6 K9 Describe how to conduct and interpret appropriate content specific assessments. (g1A, g1G)
- EU6 S1 Integrate connections between their content area and the other content areas. (b2F, c2E) (IB)
- EU6 S2 Use students' prior knowledge and experience to introduce new subject-area related content. (a2B, b1G, c2D) (IB)
- EU6 S5 Create and select activities that are designed to help students develop as independent learners and complex problem-solvers. (a1B, e2A, e2D) (IB)
- EU6 S6 Evaluate, select, and integrate a variety of research-based strategies such as inquiry, cooperative learning, discussion, discovery, problem-based learning, and direct instruction into a coherent lesson design. (c2J, e2A, i1A) (IB)
- EU6 S7 Make developmentally appropriate choices in selecting teaching strategies to assist diverse learners in meeting instructional strategies. (a2C, b1E) (IB)
- EU6 S9 Demonstrate the ability to recognize and value student diversity and the differences in how students learn and provide instruction to accommodate such diversity. (a1A, a2A, b2E, b1E, c2J, e2E) (IB)
- EU6 S10 Use questions and questioning to assist all students in developing skills and strategies in critical and high-order thinking, inquiry, and problem solving. (b2C) (IB)
- EU6 S11 Use resources and multiple representations of content effectively, including technology, to enhance student learning. (b2A, b2B, b2D, b2E, b2G) (IB)
- EU6 S12 Reflect and analyze past lessons to improve in the future. (i2C) (IB)

EU 8 Candidates will understand that effective educators explicitly integrate the teaching of reading, writing, communication and technology across content areas. Candidates will:

- EU 8 S6 Prepare students to critically and creatively respond to text dependent issues and questions orally and in writing. (f2G, f2J)
- EU8 S10 Design curriculum and instruction that guides students to write informative/explanatory texts that analyze complex ideas; to write narratives that present real or imagined events that utilize effective technique, well-chosen details, well-structured event sequences, and standard conventions. (f2G)
- EU8 S11 Engage students in inquiry-based research supported by specific evidence to develop research, writing and argumentation skills (b2H, f2G)
- EU8 S12 Utilize a variety of technological tools and skills to support literacy instruction and personal communication skills, including but not limited to computers, cameras, interactive web sites, blogs, online research. (b1F, b2D, b2G, e2F, e2G, i2K, i2L)

EU 11 Candidates will understand that effective educators maintain and utilize global perspectives and international-mindedness when engaging in teaching, learning and leading, including the awareness and application of the social, cultural, inter-cultural and linguistic facets of student achievement. Candidates will:

- EU11 S7 Engage in different ways of knowing within or across various disciplines. (b2B) (IB)

Conceptual Framework

This course embodies the conceptual framework –*Social Action through Education*– of the School of Education (SOE) at Loyola University Chicago. As teachers, we recognize our connection to students as individuals and as members of a larger community. We serve others (students as well as families and communities) by creating experiences that encourage creative, moral and intellectual

development. Leaders in our classrooms and larger school communities, we must consider how education can be transformational and how we might be agents of change. In this course sequence, we will explore what it means to hold high expectations for all learners that include academically challenging, personally and socially relevant knowledge and complex learning skills. In order to successfully provide opportunities for youth to meet these expectations, we must also be committed to reflecting on our own practice and to continually developing our own knowledge, skills and professional dispositions.

Dispositions

Candidates commit to the following dispositions:

Inquiry: Candidates use discipline-recognized processes for generating new knowledge in order to expand their theoretical understandings, ability to solve problems and analyze programs. They will deepen their personal understandings, improve their practice, and apply their learning about communities, families and students. Candidates will draw upon or collect various forms of data and information including literature, quantitative and qualitative data, formal and informal assessments, information about students, families and communities, and personal reflection when generating new knowledge. Candidates use their inquiry-based generated knowledge using multiple sources to inform their instruction and promote learning for all.

Social Justice: Candidates adopt a stance of affirming and welcoming diversity in both local and global communities. They demonstrate respect for and understanding of differences across and within groups through their spoken and written course contributions as well as in the actions they take. Candidates promote social justice by taking ethically guided actions to challenge practices and policies that promote or perpetuate injustices and inequities. Candidates demonstrate their commitment to continuing to develop their understanding around issues of diversity. They further demonstrate their commitment to contribute to the work of preventing and/or undoing injustices by advocating for individuals, populations, or groups who currently are, or have historically been, oppressed and marginalized through covert and overt practices on the part of institutions or individuals.

Professionalism: Candidates demonstrate personal responsibility and agency by engaging in proactive problem resolution and conflict management. Candidates promote their own development and the development of others and engage in collaborative relationships that promote mutually beneficial outcomes. Candidates adhere to ethical practices, guidelines, and professional standards of their profession.

Each sequence and module in the *Teaching and Learning with Schools and Communities Program* (TLLSC) focuses on specific professional dispositions and candidates are offered opportunities to receive feedback on their dispositional growth. The teacher candidate commits to appropriate professional and interpersonal behaviors in this module by:

- D4 demonstrating professionalism and reflective practice in collaborating with teachers, students, administrators, families, and communities to improve achievement for all students. (9N) (IB)
- D5 participating in ongoing professional development, reading, and research in order to deepen their knowledge and expand their repertoire of skills. (9O) (IB)
- D7 valuing and utilizing the unique identities and backgrounds of all students, families and communities as essential assets in learning environments. (9L, 9N) (IB)

- D9 demonstrating that authentic literacy instruction is the responsibility of all teachers, across all disciplines and grade levels. (2H, 6A) (IB)
- D15 valuing and promoting curiosity, creativity, and life-long learning in students. (IB)

Diversity

Course instructors strive to facilitate an inclusive environment respectful of all members of the class community with appreciation and respect for age, ability, color, creed, cultural background, ethnicity, gender identity or expression, national origin, race, religious affiliation or spiritual affinity, sexual orientation, socioeconomic class, or other status. If you are a student who requires any special considerations, please inform the instructor during the first week of class.

Sequence Four Professionalism and Participation Policies:

It is expected that teacher candidates in Sequence Four partner sites will demonstrate high levels of professionalism and responsibility in all aspects of their work in this sequence. In order to complete the module assessments and requirements in a satisfactory manner, candidates must be present for all sessions, while in partner classrooms, sequence instructional sessions on campus and at any informal partner sites. In the event of approved absences, candidates should contact their professors and school sites in the manner that is requested by the administration at the respective schools.

I expect you will attend each class session and arrive on time. I expect you to make regular and thoughtful contributions to class activities, discussions, and group projects for your own learning and those of others. I also expect you to arrive prepared for class through careful reading and reflection and timely completion of assignments. The following guidelines for participation will be considered in the module grades.

Professional Attitude and Demeanor Part I

- 2-Always prompt and regularly attend sessions. (no absences or tardies)
- 1-Rarely late and regularly attend sessions (No more than 1 absence).
- 0-Often late and/or poor attendance at sessions (More than 2 absences).

Professional Attitude and Demeanor Part II

- 2-Always prepared for sessions with assignments and required materials.
- 1-Rarely unprepared for sessions with assignments and required materials.
- 0- Often unprepared for sessions with assignments and required materials.

Level of Engagement in Class

- 2-Always a willing participant. Contributes by taking initiative, offering ideas and asking questions in sessions, small groups and classroom sessions.
- 1-Often a willing participant. Contributes by taking initiative, offering ideas and asking questions in sessions, small groups or classroom sessions
- 0-Rarely a willing participant. Rarely contributes to sessions by taking initiative, offering ideas or asking questions.

Integration of Readings into Classroom Participation

- 2-Often cites from readings; use readings to support points.
- 1-Occasionally cites from readings; sometimes use readings to support points.
- 0-Rarely cite from readings; rarely use readings to support points.

Listening Skills

- 2-Listens when others talk, both in groups and in sessions. Incorporate or build off of the ideas of others.
- 1-Listens when others talk, both in groups and in sessions
- 0-Rarely listens when others talk, both in groups and in sessions.

Course Evaluation

Grading

All assignments will be graded using the rubrics posted on Sakai and LiveText throughout the semester. Each assignment will be calculated into the total number of points for the course. The number of points earned will be divided by the number of points possible, and a letter grade will be assigned using the scale below.

Assignments and readings are due on the dates listed on the course syllabi unless permission to hand them in late is given. Conflicts with an assignment deadline should be discussed and resolved prior to the assignment's due date. Late work will only be accepted under special circumstances (e.g.,

family emergency, illness). Please *contact your professor* in person or by phone or email *prior to any given due date* to discuss assignment extensions requests. Failure to do so in a timely manner will result in significant grade deductions. **Computer or technical problems are not an acceptable excuse for late work.**

Unless otherwise noted, all assignments must be typed. Please double-space your work and use 12 point font. Attend closely and carefully to spelling and grammar. If referencing course or other textual materials, please follow American Psychological Association style guidelines (APA – 6th edition). You can access the APA style manual through Loyola University Chicago’s libraries or online at <http://www.apastyle.org>.

Also, as a reminder, all assignments in this course will be submitted via **LiveText**. Please make certain you have activated your LiveText account if you have not already done so.

Grading Scale:

A	93 - 100
A-	90 - 92
B+	87 - 89
B	83 - 86
B-	80 - 82
C+	77 - 79
C	73 - 76
C-	70 - 72
D	61 - 69
F	60 - 0

Sequence Four Summative Assessment:

At the conclusion of the semester, candidates complete a summative assessment with the goal of synthesizing material from across TLSC 231 and TLS 232. The summative assessment will count toward the final grade in each course module.

Required Texts, Readings and Resources

Settlage, J. & Southerland, S.A. (2012). *Teaching science to every child: Using culture as a starting point* (2nd ed.). New York, NY: Routledge.

***Note that this book and ebook is available on reserve through Lewis Library

Other materials posted on Sakai.

Loyola University Chicago School of Education Syllabus Addendum

IDEA Course Evaluation Link for Students

Each course you take in the School of Education is evaluated through the IDEA Campus Labs system. We ask that when you receive an email alerting you that the evaluation is available that you promptly complete it. To learn more about IDEA or to access the website directly to complete your course evaluation go to: <http://luc.edu/idea/> and click on **STUDENT IDEA LOGIN** on the left hand side of the page.

Dispositions

All students are assessed on one or more dispositional areas of growth across our programs: **Professionalism, Inquiry, and Social Justice**. The instructor in your course will identify the dispositions assessed in this course and you can find the rubrics related to these dispositions in LiveText. Disposition data is reviewed by program faculty on a regular basis. This allows faculty to work with students to develop throughout their program and address any issues as they arise.

LiveText

All students, *except those who are non-degree*, must have access to LiveText to complete the benchmark assessments aligned to the Conceptual Framework Standards and all other accreditation, school-wide and/or program-wide related assessments. You can access more information on LiveText here: [LiveText](#).

Syllabus Addendum Link

- www.luc.edu/education/syllabus-addendum/

This link directs students to statements on essential policies regarding *academic honesty, accessibility, ethics line reporting* and *electronic communication policies and guidelines*. We ask that you read each policy carefully.

This link will also bring you to the full text of our conceptual framework that guides the work of the School of Education – ***Social Action through Education***.