

# Chapter 11

## Integrating English Language Arts and Science: Promising Practices for Undergraduate Elementary Teacher Licensure Candidates

**Kim Brown**



<https://orcid.org/0000-0003-0852-8857>

*University of North Carolina at Asheville, USA*

### **ABSTRACT**

*The theory of Pragmatism naturally gives way to the concept of integrated and hands-on teaching methodologies. Teacher training programs grounded in the liberal arts are prime spaces for pre-service elementary teachers to learn about curricular integration. Pedagogy surrounding the integration of science and English language arts is particularly pertinent for today's classrooms. This chapter provides a description of how an elementary education science methods course was revised to include teaching methods for instructing teacher licensure candidates to teach their future students using an integrated and hands-on approach. Instructor lecture outlines and lab packets which include interactive class activities, instructions for teaching essential Science content, instructions for utilizing effective English Language Arts strategies for facilitating student comprehension and concept development, and inclusion of high-quality texts from the Common Core Exemplary Text list are provided.*

DOI: 10.4018/978-1-6684-5939-3.ch011

## INTRODUCTION

It was the year 1897, and McKinley, a former teacher, was serving as president of the United States. Schools were beginning to teach English as a second language, and Booker T. Washington was advocating for educational changes to provide a foundation for students as lifelong learners. John Dewey had written a prolific and enduring piece centering on a personal pedagogical doctrine.

Written within this doctrine, Dewey (1897) outlined a statement of beliefs centering on five themes. The first theme is his definition of education. This definition suggests that both psychological and sociological facets characterize education. Dewey stated:

*I believe that the individual who is to be educated is a social individual and that society is an organic union of individuals. If we eliminate the social factor from the child we are left only with an abstraction; if we eliminate the individual factor from society, we are left only with an inert and lifeless mass. Education, therefore, must begin with a psychological insight into the child's capacities, interests, and habits. (para. 6)*

Next, Dewey defined school. Dewey's definition centers on school as a product of the student's present life, and how what occurs at school should serve as a continuation of what is occurring in the student's home life. Dewey justified this by saying:

*Existing life is so complex that the child cannot be brought into contact with it without either confusion or distraction; he is either overwhelmed by multiplicity of activities which are going on, so that he loses his own power of orderly reaction, or he is so stimulated by these various activities that his powers are prematurely called into play and he becomes either unduly specialized or else disintegrated. (para. 11)*

The third aspect of Dewey's philosophy defines the subject matter of education. Dewey's ideas centered on his belief that what is taught in schools should be a product of what occurs in society, and the development of students within that society. To summarize these notions, Dewey declared:

*I believe, therefore, in the so-called expressive or constructive activities as the centre of correlation. I believe that this gives the standard for the place of cooking, sewing, manual training, etc., in the school. I believe that they are not special studies which are to be introduced over and above a lot of others in the way of relaxation or relief, or as additional accomplishments. I believe rather that they represent, as types, fundamental forms of social activity; and that it is possible and desirable that the*

33 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/integrating-english-language-arts-and-science/338417](http://www.igi-global.com/chapter/integrating-english-language-arts-and-science/338417)

## Related Content

---

### Engineering Design-Based Arduino Activities in STEM Education

Hatice Yildiz Durak, Sedef Canbazoglu Biliciand Evrim Baran (2023). *Theoretical and Practical Teaching Strategies for K-12 Science Education in the Digital Age* (pp. 66-78).

[www.irma-international.org/chapter/engineering-design-based-arduino-activities-in-stem-education/317346](http://www.irma-international.org/chapter/engineering-design-based-arduino-activities-in-stem-education/317346)

### Optimizing Students' Information Processing in Science Learning: A Knowledge Visualization Approach

Robert Z. Zhengand Yiqing Wang (2016). *Knowledge Visualization and Visual Literacy in Science Education* (pp. 307-329).

[www.irma-international.org/chapter/optimizing-students-information-processing-in-science-learning/154389](http://www.irma-international.org/chapter/optimizing-students-information-processing-in-science-learning/154389)

### Integrated Physics Learning Using an Interdisciplinary Inquiry Learning Space: An Exploratory Study Using Computer Programming

João Robert Nogueira, Pedro Carmona Marquesand Cristina Guerra (2023). *Handbook of Research on Interdisciplinarity Between Science and Mathematics in Education* (pp. 176-195).

[www.irma-international.org/chapter/integrated-physics-learning-using-an-interdisciplinary-inquiry-learning-space/317908](http://www.irma-international.org/chapter/integrated-physics-learning-using-an-interdisciplinary-inquiry-learning-space/317908)

### Supporting the Enactment of Standards-based Mathematics Pedagogies: The Cases of the CoDE-I and APLUS Projects

Drew Polly, Christie Martin, Chuang Wang, Richard G. Lambertand David Pugalee (2016). *Innovative Professional Development Methods and Strategies for STEM Education* (pp. 137-148).

[www.irma-international.org/chapter/supporting-the-enactment-of-standards-based-mathematics-pedagogies/139656](http://www.irma-international.org/chapter/supporting-the-enactment-of-standards-based-mathematics-pedagogies/139656)

## Gestural Articulations of Embodied Spatiality: What Gestures Reveal about Students' Sense-Making of Charged Particle Dynamics in a 3D Game World

Lai Har Judy Lee and Yam San Chee (2015). *STEM Education: Concepts, Methodologies, Tools, and Applications* (pp. 233-256).

[www.irma-international.org/chapter/gestural-articulations-of-embodied-spatiality/121842](http://www.irma-international.org/chapter/gestural-articulations-of-embodied-spatiality/121842)