

B. Curriculum Integration

Group Members

Stephanie Bennett, (co-chair), *Mississippi State University*

Karen Swanson, (co-chair), *Mercer University*

Mary Beth Schaefer, *St. John's University*

Kristina Falbe, *Georgia College & State University*

James Nagel, *Saint Michael's College*

Definition of Research Area and Terms

Integrated Curriculum. Developing curricula that is relevant to students and exploratory in nature has been part of the middle grades movement since its inception (National Middle School Association, 2010; Schaefer, Malu, & Yoon, 2016), and a curriculum that is “integrated” is organized around the intersections among real world problems and students’ interests (Beane, 1996). Subject area lines blur as students engage in inquiry and exploration with the goal of understanding and addressing interesting ideas and problems. In the middle grades literature, we see pulses of the spirit of curriculum integration in the following areas of literacy, personalized learning, and project/problem-based learning.

Literacy Integration. Literacy integration can take several turns. One involves integrating the various processes of literacy in interdisciplinary endeavors that include reading, writing, listening, and speaking. Literacy integration can also be discipline specific (e.g., Alvermann, Gillis, & Phelps, 2013; Bennett & Hart, 2015; Hart & Bennett, 2013) so that students read, write, speak, and listen in subject area classrooms. In these instances, the goal is for students to understand the ways that mathematicians, historians, social scientists, and so on actually use literacy processes in their fields. A third way to look at literacy integration involves understanding literacy as a social construction. In this conception, middle grades students examine multiple forms of texts through different modalities, aiming to understand how

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the *information* and messages from different content areas connects with their developing identities and worldviews (Thompson, 2008).

Personalized Learning. A personalized learning curriculum allows students to access their abilities and interests to meet specific goals and demonstrate learning in a wide variety of ways with the support of adults (Clarke, 2013; Keefe, 2007). Personalized learning also provides students with learning opportunities that are based on sound middle grades practices including curriculum integration (Nagle & Taylor, 2015); technology integration (Richardson, 2012) and extended learning opportunities (Freely & Hanselka, 2009). Personalized learning promotes meaningful relationships and student voice in and out of the classroom (Ellerbrock & Kiefer, 2010).

Problem-based and Project-based Learning (PBL). In problem-based learning and project-based learning, students constantly pose and refine questions and design and construct simple and/or complex investigations, which require them to gather, analyze, and interpret data to report findings. These student-centered, inquiry-based pedagogical approaches, which are collectively referred to here as PBL, have been shown to be effective for facilitating knowledge acquisition and retention (Dochy, Segers, Van Den Bossche, & Gijbels, 2003; Mergendoller, Maxwell, & Bellissimo, 2006; Penuel, Means, & Simkins, 2000; Ross, Sanders, Wright, Stringfield, Wong, & Alberg, 2001), supporting the development of important real-world skills such as solving complex problems, thinking critically, analyzing and evaluating information, working cooperatively, and communicating effectively (Duch, Groh, & Allen, 2011), and for developing flexible knowledge (Boaler, 1997; English & Kitsantas, 2013).

Literature Review Process

In the early part of this process, the group discussed what might be encompassed in the

topic pedagogy and assessment and recognized that these topics were too broad for this project. After additional deliberation, we decided that curriculum, instruction, and assessment in the middle grades is best represented with curriculum integration. We realized that while the term curriculum integration has existed for many years in the middle grades, integration now occurs through many models. As a result, we focused our questions on 21st century approaches to integration in the middle grades, with the subtopics of literacy integration, personalized learning, project-based learning, and problem-based learning. While we recognize that this approach is not exhaustive, we feel that this approach best captures what is unique about middle grades curriculum, instruction, and assessment.

The workgroup examined middle grades literature (e.g., *Middle School Journal*, *Research in Middle Level Education (RMLE)*, *Middle Grades Research Journal*, *Voices from the Middle*, *The Handbooks of Research in Middle Level Education*) to guide us in the development of research questions. The literature reviewed was published between 2000-2016. We conducted hand-searches of the specific journals and handbooks and/or used search terms (e.g. pedagogy, integrated curriculum, personalized learning) to locate literature relevant to the topics of middle grades pedagogy and middle grades assessment. We created Google Docs for each of the sources and listed the title of the article, the accompanying abstract, and keywords or themes describing article. The research questions were formulated from our conversations about what was and was not present in the literature base.

Research Questions

Curriculum Integration

1. What has been the evolution of integrated curriculum in the middle grades?
2. What approaches to integrated curriculum have demonstrated greatest impact on student outcomes?

Literacy Integration

3. In what ways is literacy being used as an integration tool?
4. In what ways do 21st century competencies (e.g., creativity, collaboration, critical thinking, communication) influence current literacy integration?
5. In what ways do educators integrate aspects of authentic assessment in literacy integration with standardized assessments at the local school, district, state, and federal levels?
6. What impact does literacy integration have on student achievement as measured by quantitative data?
7. What is the impact of literacy integration on middle grades student engagement?

Personalized Learning

8. In what ways is personalized learning being used to integrate curriculum in the middle grades?
9. In what ways do 21st century competencies (e.g., creativity, collaboration, critical thinking, communication) influence current approaches to personalized learning?
10. In what ways do educators integrate aspects of authentic assessment in personalized learning with standardized assessments at the local school, district, state, and federal levels?
11. What impact does a personalized learning approach to curricula have on student achievement as measured by quantitative data?
12. What is the impact of a personalized learning approach on middle school student engagement?

Project-Based and Problem-Based Learning (PBL)

13. In what ways is PBL being used to integrate curriculum in the middle grades?
14. In what ways do 21st century competencies (e.g., creativity, collaboration, critical thinking,

- communication) influence current PBL middle grades classroom models?
15. In what ways do educators integrate aspects of authentic assessment in PBL models with standardized assessments at the local school, district, state, and federal levels?
 16. What impact does a PBL approach to curricula have on student achievement as measured by quantitative data?
 17. What is the impact of a PBL instructional model on middle grades student engagement?

Influential Readings

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