The Role of Technology in Providing Effective Gifted Education Services in Clustered Classrooms

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EXECUTIVE SUMMARY

The purpose of this chapter is to examine the rationale of clustered classrooms and to explore methods of using technology to enhance the educational outcomes of gifted students in clustered classrooms. The need for this training is great because clustered classrooms can help teachers overcome the problems associated with mixed-ability groupings, tight budgets, and accusations of elitism that often plague gifted education services (Brulles & Winebrenner, 2012). The chapter includes research-based strategies for facilitating clustered classrooms, provides ideas for incorporating technology across multiple content areas, identifies what exemplary student products should look like, and offers a sample lesson plan that can be adapted to cultivate problem-solving skills, critical thinking, and collaboration in a clustered classroom. By highlighting and examining these issues, the authors hope that more teachers will utilize the clustered classroom model, providing outstanding educational opportunities that can benefit all students.

SETTING THE STAGE

In an era of constrained education budgets and high-stakes standardized testing, a vital pedagogical concern is ensuring that the unique needs of gifted students are still being addressed (Brulles & Winebrenner, 2012). Traditional approaches to offering gifted services, such as homogeneous classrooms or pull-out services, often fall victim to other needs when money is tight, due in part to the misguided belief that "gifted kids will make it on their own" and perform well enough on standardized tests (Brulles & Winebrenner, 2012, p. 42). In the face of these challenges, one potential solution is the "clustered classroom" model, which consists of multiple clusters of students in a single classroom who "are grouped according to their ability and achievement levels" (Brulles & Winebrenner, 2012, p. 42). Alternatively known as within-class ability grouping (Kulik & Kulik, 1992), this model provides a compelling option for teachers and other stakeholders who are interested in providing a curriculum that is differentiated and better suited for gifted learners compared to whole-class instruction in a heterogeneous classroom. Instead of concentrating gifted students in a homogenous gifted classroom (which generally costs more money and can lead to accusations of elitism) or having mixed-ability groupings of gifted and non-gifted students (which can lead to stunted academic growth and resentment from gifted students), the clustered classroom model enables gifted students to remain in heterogeneous classrooms that include multiple levels of learners. Students in clustered classroom are grouped according to ability level, which can enable teachers to provide gifted-level academic opportunities for those who need it while avoiding the aforementioned problems that are often associated with other models of gifted education (Brulles & Winebrenner, 2012). Although "little empirical evidence is available attesting to its effectiveness" (Brulles, Cohn, & Saunders, 2010, p. 327), the evidence that exists about the cluster grouping of gifted students is promising. As a result, it is important that teachers of gifted students learn more about clustered classrooms and consider applying this model in their own schools.

Cluster grouping may be "a cost-effective way to provide gifted services," (Brulles, Peters, & Saunders, 2012, p. 200), but providing effective instruction and differentiation across clusters of varying skill levels and cognitive capabilities in a single classroom can be challenging. Although ability grouping generally yields positive results for high-ability students (Fuligni, Eccles, & Barber, 1995; Gentry & Owen, 1999; Kulik & Kulik, 1992; Teno, 2000), research on cluster grouping has also highlighted "teachers' inability to appropriately challenge students due to the diverse levels of prior knowledge, aptitude and motivation common in today's heterogeneous classrooms" (Kanevsky & Keighley, 2003, p. 21). Therefore, increased and specialized training with clustered classrooms is necessary for teachers to differentiate instruction at the highest level for all students.