College Success: A Fresh Look at Differentiated Instruction and Other Student-Centered Strategies

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Abstract

This essay addresses the success of differentiated instruction (DI) as a student-centered teaching strategy in grades K-12 and how it can be used in higher education. Most college instructors deliver instruction through lectures, a teacher-centered strategy. A review of research studies in higher education demonstrated students achieve higher academic success when DI is used. The author examines reasons why DI is not implemented in more college courses. The author explores other student-centered strategies to help students achieve academic success. Finally, the author discusses college instructors who promote various student-centered strategies to help learning and achievement for all students.

Introduction

Walk down any college hallway these days and you would see instructors standing up in front of the classroom and students sitting in rows, listening (Burke & Ray, 2008). Sound familiar? This teacher-centered strategy of lecturing in college has been around for ages. Rarely do you see a college classroom in which students are grouped together and desks are not arranged in rows. Moreover, students rarely work on course projects during class sessions. Additionally, the student population has gradually become more culturally and academically diversified (Blake, 2007; Pham, 2012). Academic success in college has become more challenging as students come into today's college classroom with various backgrounds and experiences (Pham, 2012). When planning instruction, recognizing student diversity and readiness is paramount in today's successful college classroom. Furthermore, Blake stated faculty are one of the key links between student learning and academic success. Bembenutty (2009) believed faculty can provide support and encouragement both in and outside the classroom. Even though most faculty schedule time either before or after each class session for students to ask questions about content, assignments, or quizzes and tests, not all students will ask questions. Finally, while faculty hold office hours, many students do not take advantage of this accommodation to ask for assistance (Kaufka, 2010). What are the solutions faculty can implement to promote academic success for all students? One solution that has found success in K-12 schools is a student-centered approach called differentiated instruction. What are the theoretical implications in using this strategy? Can these implications translate into future academic success for students who seek a college education? What other solutions can faculty or higher education institutions implement to help all students succeed?

Differentiated instruction is a student-centered teaching strategy promoted by Tomlinson (1999). Pham (2012) stated this teaching strategy "can accommodate a wide range of students who are either at a low level and need intensive support or at a high level and need their skills sharpened" (p. 17). The three general principles of differentiated instruction are challenging (respectful) tasks, flexible groupings, and ongoing assessments, with results allowing for adjustments to instruction (Ernst & Ernst, 2005). Faculty intentionally place students in groups based upon the results from varied diagnostic assessments. One of the key attributes in using differentiated instruction is the variety of choices students can make to demonstrate what they know, understand, and can do. The choice in products and performances differentiated can be student essays, homework, and course assignments; end of semester debates; written reports; posters; PowerPoint presentations; website design; radio interviews; skits; poems; and various tiered activities.

There are many ways to implement differentiated instruction. Faculty must be prepared, at a moment's notice, to implement different strategies and adjust instruction, so all students are achieving the learning outcomes of the lesson.

Differentiated instruction and transferable skills

Research studies relating to elementary, middle, and high school students demonstrated differentiated instruction works (Chamberlin & Powers, 2010; Flaherty & Hackler, 2010; Martin & Pickett, 2013; Painter, 2009; Tulbure, 2011). There are creative teachers who design thoughtful instruction, which allow all students opportunities in choosing activities that are interesting and engages them in the learning process; but what is translated from the use of differentiated instruction? What are the characteristics, traits, or skills students develop and use beyond the classroom if they are exposed to differentiated instruction throughout their early life? Tomlinson (1999) stated the use of differentiated instruction allow students to "make leaps of transfer and apply common sense" (p. 34). In other words, at some point in differentiated instruction, Tomlinson posits students will develop into independent learners. Tomlinson suggested a way to develop independent learners is "having them set personal goals and to assess their progress according to those goals" (p. 100). Van Bramer (2011) agreed and added, "developing self-regulation assists the student in becoming an independent learner" (p. 41). Van Bramer defined self-regulation as "the child's capacity to plan, guide, and monitor his or her behavior from within and flexibility according to changing circumstances" (p. 41). An important aspect in developing self-regulation is how the teacher *responds* to student problem-solving (Van Bramer, 2011). Self-regulation, therefore, is a necessary trait in academically successful college students (Bembenutty, 2009; DeStasio, Ansfield, Cohen, & Spurgin, 2009). Painter (2009) suggested using differentiated instruction provided a high-level of student engagement, which resulted in students being able to construct their own knowledge of the topic. Additionally, group work allowed students to

build and enhance technology and research skills. Building upon these skills at a young age can translate into skills needed for college (Martin, Garcia, & McPhee, 2012).

Differentiated studies in higher education

Research studies conducted in higher education institutions using differentiated instruction provided evidence that all students successfully achieved the course learning goals (Beloshitskii & Dushkin, 2005; Chamberlin & Powers, 2010; Ernst & Ernst, 2005; Santangelo & Tomlinson, 2009). The courses in these studies were undergraduate and graduate and ranged from technical specialist, political science, education, and mathematics. Researchers believed students learned differently and were aware of how diverse the student population had become in the last decade (Beloshitskii & Dushkin, 2005; Chamberlin & Powers, 2010; Ernst & Ernst, 2005; Santangelo & Tomlinson, 2009). Beloshitskii & Dushkin conducted a three year experimental study using differentiated instruction in a technical specialist training program. The researchers created learning tasks. These learning tasks were grouped according to cognitive abilities. Students begin by choosing learning tasks in either of the first three groups. All together there were six groups. The learning tasks in the first group included receiving and duplicating knowledge while the learning tasks in the fifth group promoted creative thinking (p. 57). When students reached the fifth and sixth groups, they mastered the subject and developed a high level of thinking and reflection. The learning goals were achieved when students completed learning tasks in the fifth or sixth groups. Additionally, the motivation to learn was much higher when differentiated instruction was implemented in the experimental group than demonstrated in the control group.

Chamberlin & Powers (2010) conducted a quasi-experimental pre-test and post-test control-group research design using differentiated instruction in an undergraduate first-year mathematics course at two universities. The lesson plans created for the experimental group included whole class instruction plus differentiated instruction, products, and performances. The researchers used differentiated instruction one-third to one-half of the time during the semester. Differentiated instruction was based upon students' readiness, interests or learning profiles. For example, student readiness allowed instruction to differentiate according to student understanding of the concepts presented after whole class instruction. Faculty provided additional activities and mini-lessons to practice for students who did not demonstrate an understanding of the concepts. Additionally, faculty provided a comparison/contrast activity for students who understood the concepts to help strengthen their understanding. An example of student interest was provided in which faculty grouped students according to interest after a concept was introduced. Each group was to provide examples which related to the common interest (p. 120). Finally, an example of students' learning profiles allowed students to choose an activity to complete individually or as a group. Afterward, faculty grouped students according to different learning styles in which each student provided an explanation of how they completed the activity. Assessments were differentiated in two projects and homework

assignments. Students were allowed to choose which product they wanted to use to demonstrate their understanding. Product choices included a written report, poster, PowerPoint presentation, website, interview, skit, or poem (p. 121).

The quantitative results from this mixed method study concluded the experimental group's growth scored higher in the post-test than the control group. The qualitative results from interviews and student work data from the experimental group revealed differentiated instruction supported student learning.

Ernst & Ernst (2005) conducted an exploratory qualitative research study based on student and faculty feedback in an undergraduate public policy course. The researchers explored whether differentiated instruction was necessary in higher education. Additionally, the study examined whether students were challenged enough based upon their readiness (i.e., prior knowledge of public policy issues). Based upon student readiness, faculty assigned students to groups. There were three groups: advanced, intermediate, and least ready. Faculty differentiated essay assignments for each group. Additionally, faculty used these groupings to create discussion questions and responses during class periods. Sometimes, faculty changed the groups based upon interest for class debates. For the end of semester debates, groups were to present a position on a public policy issue. By the time the debate occurred, all students learned key information either through reading, listening to others in the group, taping or editing (p. 47).

The results from this study concluded student composition by readiness which included major, GPA, academic abilities, and writing abilities were diverse enough to implement differentiated instruction in an undergraduate course. Students assessed the course based upon this teaching approach and concluded the assignments were appropriately challenging; the class debates brought out their strengths as a student, and they liked choosing essay topics which interested them. Additionally, Ernst & Ernst (2005) stated college professors will have to consider whether or not differentiated instruction can be implemented in their own courses.

Santangelo & Tomlinson (2009) conducted research using a self-study qualitative approach in an introductory graduate education course. The differentiated strategies implemented were supplemental readings (complexity and access), tiered assignments, interest-based centers, independent study projects, flexible grouping, flexible timelines, and reading comprehension support (p. 320). Students were provided with the opportunity to choose a variety of topics to research and report on. Additionally, students were able to choose how to report information to the class (i.e., audio or video tape, resource guide, PowerPoint presentation). For the final assessment, the class created six questions. These questions summarized the course objectives. Students were able to choose four questions to answer to demonstrate what they knew and understood. One of the findings revealed differentiated instruction can be utilized in a higher education course. Another finding stated differentiating instruction allowed

each student to acquire knowledge and understanding of the course content and activities based on their individual readiness, interests, and learning profiles.

The results from higher education research concluded differentiated instruction promoted individual student growth (Beloshitskii & Dushkin, 2005; Chamberlin & Powers, 2010; Ernst & Ernst, 2005; Santangelo & Tomlinson, 2009). While not stated in the findings, Chamberlin and Powers (2010) added there are benefits in using differentiated instruction which result in student "achievement, study habits, social interaction, cooperation, attitude toward school, self-worth, motivation and engagement" (p. 115). Student academic success in college will depend upon these attributes (Bembenutty, 2009). Why are there so few studies in higher education that use differentiated instruction as a strategy for all students to achieve higher individual growth and academic success? The results from research indicated faculty did a tremendous amount of work to set up and conduct a differentiated course (Ernst & Ernst, 2005; Santangelo & Tomlinson, 2009). Additionally, these studies did not imply the course used in differentiated instruction would be used after the research was completed. In other words, none of the research stated differentiated instruction was used in future courses at these colleges and universities. Tulbure (2011) evaluated empirical studies on differentiated instruction and identified several disadvantages to its use in higher education which were "loss of time and energy on professor's side; impossibility to apply on every didactic activity; difficulties to apply when the professors haven't been formed in this paradigm; difficulties in designing instructional activities so as they assure the achievement of objectives by all students" (p. 81). While there have been positive results in K-12 and higher education studies using differentiated instruction, there is not enough empirical research for college instructors to implement this approach in their classrooms.

Higher education and other student-centered strategies

While a few higher education faculty members have embraced the notion of differentiated instruction, the assumption is the majority of college instructors will focus on the traditional teacher-centered strategy of disseminating information in lecture form (Burke & Ray, 2008; Chamberlin & Powers, 2010; Handy, 2005; Smith, 2006). These are decidedly two ends in the spectrum of instruction. There are other strategies higher education uses for students to make a successful transition into the college environment. Evidence in research demonstrated differentiated instruction does not always appear as a strategy; however skill development, self-regulation, and learner independence promoted in differentiated instruction do appear in other strategies (DeStasio, Ansfield, Cohen, & Spurgin, 2009; Fowler & Zimitat, 2008; Martin, Garcia, & McPhee, 2012). For example, DeStasio et al. (2009) discussed students achieving autonomy while releasing dependency in relying on others, through a freshman seminar at a university (p. 48). The university believed students needed to become independent learners. The seminar's success promoted freshman students who are well-prepared for college life with an ability "to read more closely, write more carefully, and to think independently" (p. 48). Additionally, the

seminar promoted individualized learning in research, where students "learn how to ask questions, look for additional information, integrate new facts into an existing framework, and pose new problems productively" (p. 49). In short, these students have moved away from being dependent on someone else for knowledge or to show them how to do a task step-by-step to becoming an autonomous participant in their pursuit of higher education. The success of this strategy has led the university to continue to use this program for incoming freshmen.

Fowler and Zimitat (2008) provided another example of how students can achieve successful integration into the college environment through a program, Common Time (CT). This strategy was a non-credit event where students learn basic college skills such as Internet research, essay-writing, fieldwork, and oral presentations provided in various workshop venues. Additionally, time is set aside during these events for informal dialogue between student and student or faculty and student in the college's effort to create a comfortable learning community to serve student needs. Voluntary choices are made by each student whether to attend these events or not. Overall, students' involvement in the program created an investment in their own learning and ultimately became independent learners.

Martin, Garcia, & McPhee (2012) provided a third example in which a university and high school collaborated and implemented an information literacy outreach program. School administrators, librarians, and teachers in both educational environments identified certain attributes college students must have to be successful and designed lesson plans that integrated curriculum standards, technology, and information competency (p. 36). The program focused on developing research, critical thinking, and information literacy skills for students in grades 9 through 11. This program had been ongoing for years and provided some semblance of differentiated instruction by using cooperative learning practices, students completing task work, individualized support and instruction, and informal ongoing assessment with results that led to adjusting instruction. The fact that the program has been ongoing for years demonstrates the success of what both educational institutions want students to achieve.

If faculty were to use strategies throughout the semester such as those mentioned above, it may prove to be beneficial to any student whether they were taught using DI or not in becoming an ever-achieving, independent learner. There are many strategies currently in use for faculty to help students achieve academic success (Bembenutty, 2009; McFarlane, 2010). McFarlane recognized student diversity and created contingencies in course assignments to meet all student needs. Bembenutty stated faculty "need to teach students how to learn" (p. 567) in order for them to develop self-regulation of learning. Additionally, faculty need to provide support and encouragement to build students' self-efficacy beliefs, help them with organizational skills such as setting study times and keeping weekly planners (p. 567). Prior to college, Ivey (2011) stated teachers develop instruction in middle and high school which encourages interest, is meaningful, and challenges students to improve their skills and broaden their intellectual and interpersonal skills (p. 98). Whether teachers are

employed in the K-12 environment or as college instructors, part of their job lies in recognizing how important student skills, knowledge, and understanding are and creating an environment that embodies learner growth and success for all.

Conclusion

This discussion took a fresh look at differentiated instruction, its theory, implications, and use in higher education. The success of this student-centered strategy in K-12 provided information for higher education institutions to study this strategy in their own classrooms. The reason why this strategy may not be used by college professors stems from the amount of time it takes to create a variety of instructional materials and resources to complement student needs. Other strategies used in higher education institutions are in response to students who are not ready for college life. Skill building and successful student strategies as independent learners are the premise for programs, which are currently in use, in higher education. Ultimately, a key factor of students' college achievement and success lies with the support faculty provide. If faculty cannot utilize all the principles in differentiated instruction, perhaps a fresh look at this strategy can stimulate some creative thinking by finding out what interest students have and design a field trip, develop a variety of activities for students to choose from, or have students form groups and create a website. There is an infinite amount of ways faculty can create a learning environment rich with information from many sources. Faculty focus on what students know at the beginning of the course, what students will need to know by the end of the course, and provide the necessary support either through supplemental materials or creative course projects. Faculty in higher education are one of the key links between student learning and academic success.

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◀ **Contents** (index.html)