The Delta Kappa Gamma Bulletin

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The Bulletin, an official publication of The Delta Kappa Gamma Society International, promotes professional and personal growth of members through publication of their writings. Three online issues per year, subtitled International Journal for Professional Educators, focus on research-based and documented works—applied and data-based research, position papers, program descriptions, reviews of literature, and other articles on announced themes or other topics of interest to educators. Two print issues, subtitled Collegial Exchange, focus on articles based on practice and experience related to education, the Society, women, and children, as well as personal reflections and creative works. All five issues include book and technology reviews, letters to the editor, poetry, and graphic arts.

Submissions to the Bulletin, a refereed publication, are reviewed by the Editorial Board and the Society editorial staff. Selection is based on relevance of the topics addressed, accuracy and validity, contribution to the professional literature, originality, quality of writing, and adherence to Submission Guidelines (see page 37). Editorial Board members evaluate each submission’s focus, organization, development, readability, and relevance to the general audience of Bulletin readers. Due to the diversity of the Bulletin audience, material that expresses a gender, religious, political, or patriotic bias is not suitable for publication.

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Call for Submissions

Members are encouraged to submit manuscripts for consideration by the Bulletin Editorial Board. The Delta Kappa Gamma Bulletin: Journal accepts research-based articles including Action/Classroom Research, Qualitative Research, Quantitative Research, Reviews of Literature, Program Descriptions, Position Papers, and Book/Technology Reviews. The Delta Kappa Gamma Bulletin: Collegial Exchange accepts articles of a more practical, personal nature, including Classroom and DKG Practices/Programs, Viewpoints on Current Issues, Personal Reflections or Anecdotes, Inspirational Pieces, Biographies and Interviews, Book and Technology Reviews, and Creative Writing.

Submissions should be focused, well organized, effectively developed, concise, and appropriate for Bulletin readers. The style should be direct, clear, readable, and free from gender, political, patriotic, or religious bias. For more detailed information, please refer to the Submission Guidelines on page 39 and the Submission Grids on page 40.

Listed below are the deadlines and, where appropriate, themes. Although there is a suggested theme for each issue of the Bulletin: Journal, manuscripts on all topics are welcome. The Bulletin: Collegial Exchange is not theme-based.

Collegial Exchange (85-2; Print)
(Postmark deadline is August 1, 2018)
No designated theme

Journal: Community Education (85-3; Online)
(Postmark deadline is October 1, 2018)
Pre-K to Elder • Lifelong Learning • Parental Involvement • After-School Programs • Leisure Programs • Educating the Incarcerated • Prevention and Intervention

Collegial Exchange (85-4; Print)
(Postmark deadline is December 15, 2018)
No designated theme

Journal: The Evolving Teacher (85-5; Online)
(Postmark deadline is March 1, 2019)
Teacher Collaboration • Teachers in Learning Teams • PLCs • Mentoring • Retention • Training • Recruitment • Accountability • Roles and Responsibilities

Journal: The Evolving Teacher (85-5; Online)
(Postmark deadline is May 15, 2019)
Creating Independent Thinkers • Civic Education • Generating Student Engagement and Leadership • Participatory Action Research (PAR)

Submit all materials to:

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From the Editor

The term “disruptive innovation” was initially coined in 1995 by Clayton Christensen and Joseph Bower in the *Harvard Business Review* to explore the “failure of leading companies to stay at the top of their industries when technologies or markets change” (p. 43). Although often interpreted to suggest that businesses fail to recognize innovations and their potential, the theory actually suggests that leading companies do indeed see new ways but do not value them sufficiently to make changes. Because value in business is related to profitability, the result of ensuing failure is not one of oversight but of choice.

Applying the theory to education, Thomas Arnett (2014) noted that disruptive innovation should matter to educators because it (a) “can bring about more equitable access to high-quality education”; (b) “is the mechanism for bringing about a personalized education system”; and (c) “circumvents the political battles that have historically been at the center of education reform.” Equity, for example, comes through the ready availability of technology that can connect students at all socioeconomic levels to quality education. Technology is also at the root of personalization of learning, whether through computer programs tailored to provide individualized pacing and feedback or through digital access to courses of interest from a wide range of sources. Finally, disruptive innovation by its nature lies outside established systems that tend to be favored in educational policy development. Such innovations do not challenge the established system directly but grow subtly and steadily outside the established system. When “innovators” reach a critical mass, others are drawn to the innovation and policies shift to accommodate the new demand.

Editorial board member Trybus opens the issue with a viewpoint article supporting the concept of disruptive innovation as key to the future of schools. Raulston and Alexiou-Ray focus on the ways that technology has already disrupted the status quo for pedagogy and the need to prepare preservice teachers for technology-laden classrooms. Estridge and Owens also consider shifting pedagogy in programs for nursing students; their promotion of “interteaching,” however, captures a general shift to more personalized and interactive instruction in all areas. Finally, Szabo, Larkin, and Sinclair provide research regarding the impact of technology innovation on the academic integrity of graduate level education students, noting that the experiences of this group provide food for thought regarding not only their specific practices but also how these developing educators will impact the practices of students in their future classrooms. The issue closes with Harder’s review of a book on personal growth—perhaps the key to coping with change and innovation, disruptive and otherwise!

Interestingly, this issue of the *Bulletin* arrives at a time when DKG itself is struggling with disruptive innovation in many ways but in particular through proposed amendments.
to the Society’s Constitution and Standing Rules, which will be considered at the July 2018 DKG International Convention in Austin, Texas. Proposals include consideration of substantial changes—to the Society’s name, membership categories, committee structures, nomination and voting practices, and processes such as dues collection. To many members, such changes may be unthinkable—too disruptive and too much a departure from the way things have always been done. In that case, perhaps Christensen’s comments about failing to stay at the top of one’s game or area of influence when changes occur in one’s life or environment are pertinent.

Remembering that businesses ultimately failed not because they were unable to recognize innovations and their potential but because they did not value them sufficiently begs the question of what members of DKG ultimately value. Do we value the comfort level of business as usual and “the way it has always been done”? Or do we value the legacy of Annie Webb Blanton that undergirds a Society dedicated to promoting the professional and personal growth of women educators and excellence in education? Do we value the traditions—or the possibilities? Surely, formation of The Delta Kappa Gamma Society constituted a disruptive innovation in 1929, so the concept should not be one that members fear! May members always keep in mind the words of our Founder as they consider changes for our Society.

Judith R. Merz, EdD
Editor

References

Disruptive Innovation—A Key to the Future of Our Schools
By Margaret Trybus

As educators lead change in schools and organizations, are we being innovative and disrupting the status quo? Are we ready to innovate to survive in a changing world, society, and marketplace? We have seen many innovations in education that some may think disruptive. For example, we have changed from overhead projectors to streaming videos; we now have ways for parents to check their child’s homework requirements online rather than via a teacher’s note; and we have the Internet replacing textbooks that cannot keep up with the knowledge explosion of the twenty-first century. So what counts as innovation in today’s schools? It really depends on how teachers view innovation within the context of their schools and classrooms and on the readiness of the community to accept and even demand change for improvement.

According to Clayton M. Christensen (n.d.), “disruption is a process, not an event, and innovations can only be disruptive relative to something else.” This comment suggests educators have to let go of what we are currently doing and be patient to try innovative practices that renew our focus on what education is all about—lifelong learning. If we truly strive to create access to high-quality education for all students, then we may need to look at school systems that are stagnant and teachers who are stuck. The commitment to educating every child has become harder to actualize as schools and the people in them struggle to improve, often not knowing how to solve today’s problems and hesitant to “disrupt” the system.

Taking the lead from the business world, Christensen, a professor at the Harvard Business School, has applied his theory of disruptive innovation to education. He has suggested that disruption is necessary and long overdue in schools. Taking a different view to shed light on complicated problems, he believes innovation is key and leaders need to disrupt practices intentionally. According to Christensen, Horn, and Johnson (2008), educators have to make learning intrinsically motivating for each student, and we cannot allow excuses to stop us. These excuses thwart innovation and do not get at the root cause of the problem—lack of student motivation. Leaders struggle to improve schools due to underfunding, but is money the problem? Perhaps the number of computers in the classroom is insufficient, but does evidence exist that test scores have improved through the use of technology? Should we blame the young people and their parents because students
come to school unprepared? Or is the problem that teachers are not prepared for different types of students and that teachers’ unions put a priority on meeting the needs of adults rather than students?

Interestingly, disruptive innovation takes into account what is needed to improve schools, but, unfortunately, educators lack the drive to make the change happen. For example, Christensen et al. suggested that “a key step toward making school intrinsically motivating is to customize an education to match the way each child best learns” (2008, p. 10). Individualizing education requires innovation to differentiate instruction, to adapt the curriculum to multiple intelligences, and to teach in ways that reach various learning styles. Using a “student-centric” approach will require innovative thinking and acting that challenges standardized teaching. Teachers need to replace complacency through experimentation and take risks that lead to changes in practices.

Playing it safe in today’s schools will not lead to better results. According to Johnson (2015), disruptive companies use ideas to do something different: “They see a need, an empty space waiting to be filled, and they dare to create something for which a market may not yet exist” (p. 163). This is a powerful idea that suggests teachers have to disrupt their thinking in order to act differently. Teachers and administrators have to be trailblazers who go off the beaten path of education driven by a goal and purpose to reach all students. We have to challenge ourselves as educators to prepare students for a future that will look different from that which exists today. Johnson (2015) acknowledged that, when driven by discovery, innovation can lead to detours because it relies on unconventional planning. Branching into unknown territory is part of charting an unknown course, and it can be lonely and scary. Yet, isn’t that what it takes to learn—going from the unknown to the known? As our students stretch their minds to learn, so too must educators stretch to be disruptive innovators. This is not a trend that will go away. To stay current, relevant, and meaningful, let’s embark on a journey of personal disruption and conquer new territory for schools today and, more importantly, tomorrow.

References


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Preparation More Technology-Literate Preservice Teachers: A Changing Paradigm in Higher Education

By Catherine Gurley Raulston and Jennifer Alexiou-Ray

Teachers often find that lack of knowledge about the instructional methods related to innovative teaching models utilizing technology is a barrier to successful technology integration. Accordingly, leaders in colleges of education and school systems must focus on the new skills that preservice and inservice teachers require to be able to meet the needs of tech-savvy students. The authors explore some of the newest methodologies in instructional technology, including Bring Your Own Device (BYOD), the Makerspace Movement, and coding/robotics, with a goal of encouraging educators in colleges of education and school systems to focus more targeted instruction and professional development for teachers in these areas.

Introduction

When one considers the skills a student today must have to be successful, being technologically literate is one of the first that comes to mind. Twenty-first-century students need to know more than technical terminology and how to download their favorite apps. There is a difference between being tech savvy and being technologically literate. Being tech savvy indicates the ability to perform technical tasks without regard for appropriateness and consequences, while literacy with technology includes the ability to determine the legitimacy of information on the Web and navigate appropriate uses of all types of technology.

Although one could call most of today’s youth tech savvy, true technological literacy needs to be taught, modeled, and practiced. Pedagogy that includes instruction focused on critical thinking, collaboration, and student-centered learning can help students develop the real-world skills of technological literacy (Dole, Bloom, & Kolwalske, 2016; Dwyer, Hogan, & Stewart, 2014). Given the imperative of preparing students to respond to increasingly technical environments, those providing programs for preservice teachers can help by making sure that their graduates have a global understanding of technology and its impact on the world.

Aspiring teachers must come away from teacher preparation programs being able to take what they have learned directly into the schools and work with tech savvy students. Lessons preservice teachers learn while in educator-preparation programs should ready them to provide students with access to technology-enhanced instruction that artfully weaves the skills of digital literacy across the curriculum. Teacher-education programs can support aspiring teachers by helping them learn about technology-enriched teaching and
instructional support strategies and concepts such as Bring Your Own Device (BYOD), the Makerspace Movement, and robotics/coding. These instructional strategies, when integrated throughout the curriculum, can support teachers in reaching the goal of helping students develop into responsible and technologically literate citizens.

**Bring Your Own Device**

BYOD is a relatively new concept that has emerged in the last decade. Reflecting upon its success in business, school personnel began to look at ways BYOD could be a useful instructional-support strategy as a response to several educational issues and trends, particularly instructional budget constraints, the benefits of one-to-one computing, and the personalization of mobile devices (Levin & Schrum, 2012). Educational researchers and practitioners see one-to-one computing as changing the game for education with regard to student engagement, teaching twenty-first-century skills, and the integration of project-based learning (Lindsay, 2016). Unfortunately, many school systems do not have the monetary means to create or sustain a one-to-one environment. The answer to this for many K-12 school systems across the nation is to implement school or district-wide BYOD initiatives, which includes BYOD for instructional support but also addresses more technical, procedural, and policy needs that BYOD environments necessitate (Levin & Schrum, 2012; Schrum & Levin, 2015). A BYOD program provides an opportunity for students to bring electronic devices from home—iPads, tablets, laptops, and cellphones—that they can use in a school environment. However, what is often lacking with BYOD initiatives is the training to help teachers leverage devices for increasing technological literacy among students.

While BYOD seems to have many advantages, limitations also exist. Some school districts grow concerned about the amount of bandwidth that will be used and the investment that might have to be made to infrastructure in order to support the devices. Teachers have expressed concern about curriculum not being universal across all platforms. For example, some curriculum might be designed to work with a tablet, but a student might have access to a laptop instead. Finally, not all devices are designed for classroom use. Therefore, it could be beneficial for a district to create a list of approved devices that students could use (Schrum & Levin, 2015).

Teaching using BYOD as an instructional-support strategy is quite different from teaching in a traditional learning environment (Parsons & Adhikari, 2016). For example, K-12 Blueprint (https://www.k12blueprint.com/toolkits/byod) provides toolkits with resources for educators and success stories regarding the management of BYOD in a classroom. Each toolkit is equipped with tools, success stories, and other resources to assist an educator with successfully implementing BYOD in the classroom. The site also offers a solution planner to help compare devices to find the best fit for the instructional situation. Resources such as this can help professors model BYOD teaching strategies and classroom management in teacher-education classes. In addition, facilitating observations in “high tech” K-12 classrooms can equip preservice teachers with the knowledge to manage a technologically rich learning environment supported by collaboration, critical thinking activities, and student-centered learning. Ultimately, when college professors plan purposeful technology-integration experiences, preservice teachers leave higher-education institutions with a more complete knowledge of planning, executing, and assessing lessons with a digital literacy component, and they become adequately prepared to face the students who are “powered up” in their classrooms (Brooks-Y oung, 2010).
Makerspace Movement

In addition to BYOD, implementing making activities for preservice teachers, whether they are directly tied to technological proficiencies or not, can provide access to resources and problem-solving skills to help students learn the twenty-first-century literacies of collaboration, innovation, modification, and redefinition (Castro-Romero, 2017; Martinez & Stager, 2013; Richardson & Haylock, 2012). In the classroom “a makerspace presents readily-available materials that can act as a provocation for inquiry, as well as modern technology and items to invent” and create student-imagined solutions to curricular-based problems (Makerspace for Education, n.d., para. 1).

Makerspace for Education (http://www.makerspaceforeducation.com/) provides resources and ideas for higher educators and inservice teachers to create makerspaces in their classrooms or schools. Maker Challenge cards (http://www.makerspaceforeducation.com/maker-challenges.html) that provide specific challenges for students to construct, design, and build are available under Materials of a Makerspace. Examples of such activities in a makerspace are constructing and programming robotics, building with Legos, wiring circuitry, 3-D printing, and so forth. Components of critical thinking and collaboration when working in a maker environment support technological literacy and can be implemented with K-12 students. Preservice and novice teachers begin to integrate the activities that were modeled in their higher-education classrooms to support student-centered learning.

Historically, the makerspace movement in the higher-education environment began in computer science and engineering fields but has moved to education as an idea to embed more Science, Technology, Engineering, Arts, and Mathematics (STEAM) instruction for preservice teachers. Novice teachers leaving teacher education to get their first jobs are seeing an increased focus of STEM/STEAM instruction across all content areas. Thus, the maker movement can be combined with all other subjects to create interdisciplinary, hands-on learning (Peppler & Bender, 2013).

With any cutting edge instructional-support strategy, educators are asked to show the efficacy of engaging students in a new and different way. Critics of making often focus on cost, student responsibility, lack of teacher buy-in, and lack of academic rigor. However, Martinez and Stager (2013) discussed the ideas that a maker culture in a school can be creatively funded and actually encourages students to take on greater responsibility, problem solve, and see things to completion. Preservice and novice teachers can help to instill a maker culture in schools by creating a mutually beneficial relationship with their mentor teachers in which both are sharing their ideas and experiences.

Robotics and Coding

Last, another cutting-edge element for integration into the teacher-education curriculum is coding and, by extension, robotics. Coding can be explained as a set of words or instructions that tells a computer, website, or software what to do. When students work with robotics, they often employ coding to make the robot come to life. The inclusion of robotics/coding, like BYOD and the Makerspace Movement, encourages critical thinking and problem-solving, which can help build technological literacy. Introducing preservice teachers to robotics and coding enables them to examine STEM/STEAM instruction more closely and be better prepared to teach their future students.

Although the concept of integrating coding into the general education classroom may seem daunting, much of what is currently being taught in K-12 education focuses on teaching students coding concepts in either a non-computer or block-based computing environment. With these types of lessons, teachers are required to know very little, if any,
computer science (CS) to be able to facilitate the learning of coding concepts (Brookhouser & Megnin, 2016). A lesson that does not require a computer is often termed “unplugged” because computer technology is not needed. An unplugged lesson might include simply teaching the students the basics of CS syntax. Educators are readily sharing resources such as the CS Fundamentals Unplugged Lessons by Code.org.

Progression from “unplugged” to “plugged” lessons with computers might start with block-based programming. These simple coding programs for students and educators are in a friendly, graphical format with the more complex language hidden behind virtual building blocks. One resource that allows for this type of progression is Code.Org (https://studio.code.org). This site offers free training for educators and ready-made plugged and unplugged lessons that can be immediately used in the higher-education or K-12 classroom. Unfortunately, many educators think that they must be computer scientists in order to code, but this is not the case. Sites such as Code.Org and Google CS First (https://csfirst.withgoogle.com) provide resources that can prepare any teacher to teach these concepts (Brookhouser & Megnin, 2016).

Once teachers become more comfortable with coding concepts, they can also generate cross-disciplinary lessons that allow students to integrate CS with other subjects. One example of a teacher-generated lesson that incorporates robotics or coding with Sphero robotics (https://www.sphero.com/test), making, and literature is a high school AP computer science lesson called the Triwizard Sphero Challenge (https://wpsd.net/blogs/hslibrary/2017/10/12/library-hosts-triwizard-sphero-challenge/). In this lesson, students engage in a Breakout (an escape-room type game) related to the Harry Potter series by J. K. Rowling (1997-2007). They solve puzzles that involve computer-science concepts to get clues to complete the breakout. Lessons like the Triwizard Sphero Challenge encourage critical thinking, problem solving, and collaboration. Students lead the learning to develop a solution to the problem and conquer the challenge.

Conclusion

Educators across the world are increasing their focus on teaching students about critical thinking and collaboration for technology-related disciplines that do not have qualified applicants or for jobs that have yet to be invented (Soule, 2016). It is important that preservice teachers, inservice teachers, and administrators have a working knowledge of the aforementioned instructional support strategies and the impact they can have on student learning. Integration and implementation of BYOD, Makerspace Movement, and robotics/coding in teacher-education programs demonstrate best practice. Preservice teachers learn to manage an interactive, technology-enhanced environment and engage students in the use of programs and applications. These strategies encourage a more student-centered approach to learning through experimentation and acquisition of technological literacy skills. Arguably the most important contribution from the integration of these best practices in teacher-education programs is the ability for preservice and novice teachers to take leadership roles, both learning from and sharing with their more experienced colleagues.

References
Disruptive Innovation


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Effectiveness of Interteaching with Senior Baccalaureate Nursing Students
By Karen M. Estridge and Jacqueline K. Owens

Teaching methods in higher education today continue to include the lecture-discussion format. This method often leads to last-minute studying as students rush to prepare for tests and assignments. Recent evidence-based strategies may better support consistent engagement of students with varied learning styles. This quasi-experimental, mixed methods study accordingly considered the effectiveness of the technique of Interteaching. The convenience sample included 289 senior nursing students. Data compared students in the same courses with the same faculty in fall semesters of 2014 and 2015. Although grades improved from a course mean score of 84% (2014) to 88% (2015) and faculty evaluations increased from 3.65 to 3.87 on a 4.0 scale, no significant relationship emerged between the Interteaching method and traditional method of lecture-discussion. However, student responses to open-ended questions uncovered themes demonstrating deeper understanding and improved study habits. Interteaching can be a useful method of instruction to assist students to become active, confident learners.

Today’s learners in higher education range in age from older students (e.g., younger Baby Boomers and Millennials) seeking a second career to the new iGeneration (often referred to as Z Generation), who are just beginning to exit high school. Each generational cohort has its own set of values, motivations, and attitudes (Weidmer, 2015). These students demonstrate variety in learning styles, such as learning by reading, note-taking via pen and paper, visually scanning information, and copying and pasting content. The pedagogic diversity of these students demands creative and innovative modes of teaching to enhance learning. Despite learning-diversity and generational challenges for faculty, recent evidence-based strategies may support ways to keep students engaged. For example, Thaler (2013) noted that opportunities such as peer teaching and dynamic learning activities beyond the traditional lecture method are best-practice instructional techniques, especially for students in Generation Y and possibly Z.

Current classroom teaching methods in nursing education and in other educational settings often include lecture-discussion format, case study reviews, and electronic independent work that tests knowledge with one or more examinations per semester. Thaler (2012) noted that Generation Y students respond to pedagogical strategies that involve “active learning” and classroom activities that maximize peer interaction as opposed to traditional lecture format (p. 270). Weidmer (2015) supported that today’s learners, compared to other generations, “...tend to be more inclusively community oriented, and seek a sense of meaning in greater contexts” (p. 54). The traditional pattern of instruction that involves reading assignments and lectures can lead to isolated, intermittent study
and passive learning as students prepare only at the last minute for written papers and exams. Students may regard textbooks and reading assignments as optional, pursued if one has ample time or an approaching exam. Evolving methods of instruction such as Interteaching are necessary to engage learners and enhance knowledge retention among multigenerational students.

The Concept of Interteaching

Interteaching, a behavioral approach to learning, continues to emerge as an effective alternative to the more traditional lecture-based instruction. Interteaching encourages class preparation and student participation (Saville, Zinn, Neff, Van Norman, & Ferreri, 2006). According to Boyce and Hanline (2002), the original researchers of the Interteaching strategy, “This approach evolved from exploratory use of small group arrangements...leading ultimately to a format that is organized around focused dyadic discussion...and precision teaching but offers greater flexibility for strategies that are based on behavioral principles” (p. 215). Research in the behavioral sciences has associated alternative teaching methods (e.g., flipped classrooms, Interteaching) with higher student engagement in classroom discussions, enhanced retention, improved student performance, and more positive faculty evaluations (Gilboy, Heinerichs, & Pazzaglia (2015).

Interteaching is a multicomponent teaching method, with philosophical roots in B. F. Skinner’s operant psychology (Boyce & Hanline, 2002). Behavioral applications of learning in higher education have demonstrated improvement in student retention and performance (Brown et al., 2014). The process involves instructor-developed study guides (called prepguides in this study). These guides consist of 10–15 questions related to assigned readings that support content familiarity by directing students to important textbook information and that foster critical thinking. The combination of active learning, immediate social reinforcement from peers, and faculty support through a cooperative learning environment help to clarify the relationship between preparation and testing. This clarity leads to better information retention (Saville & Zinn, 2005).

Interteaching can also enhance critical thinking. According to Grigg (2012), critical thinking involves problem solving, problem posing, developing sound arguments, and making good decisions. In turn, critical-thinking pedagogy uses teaching strategies that deepen students’ capacities for sound reasoning (Grigg, 2012). Although knowledge about Interteaching exists primarily in the higher-education setting, the Interteaching approach could potentially have an impact on any student—possibly as young as in middle school—with the ability to prepare independently.

Little is known about the effectiveness of the Interteaching instructional method among nursing-student populations. This article discusses a study that considered 2 years of data from students taking the same course with and without the use of the Interteaching instructional method, including assigned preparation for class, use of small groups, and real-time adjustment of lecture content to address student concerns.

Theoretical Framework

The theoretical framework that guided this study included consideration of several methods common to nursing education. Constructivist theory seemed to best fit the Interteaching method, because knowledge for nursing practice is not typically directly transmitted from professor to student via hardwiring or the click of a button. Gilboy et al. (2015) suggested that faculty possess knowledge to be shared in a way that adds meaning and that allows for reconstruction of knowledge that builds upon known information.
Brandon and All (2010) thus suggested that concepts of constructivism might be most appropriate for nursing students. Students must have the opportunity to build upon prior learning. Brandon and All suggested that nurses are comprehensive learners, processing information more often than just memorizing content. Also, pedagogy in general now emphasizes the benefit of critical thinking over memorization.

The teaching and learning concepts described above align well with the Interteaching method of classroom learning. More independent student work is required to prepare for a class utilizing Interteaching, first with peers, then with faculty in large discussion groups for reinforcement of new information. This method incorporates self-discovery, learning by doing, and engaged learning to encourage critical thinking and sequential learning. Brandon and All noted, “…with large student groups, innovative teaching strategies can be employed to promote student responsibility for their own learning, lessen anxiety, and improve testing results in nursing courses” (2010, p. 91).

**Literature Review**

Nursing education is complex and requires lifelong retention of concepts and specialized knowledge. Many other disciplines also require educational rigor to prepare students to become part of a stronger workforce, using methods to foster a desire for learning throughout one’s career.

Gilboy et al. (2015) asserted that, given the increasing amounts of information students are expected to learn, leaders at institutions should consider alternative methods to deliver curricula. Arum and Roska (2011) reported American college students lacked significant improvement in critical thinking, complex reasoning, and writing skills after three college semesters. Arum and Roska also noted continued concern regarding the ability of college graduates to think critically, based on expectations of faculty and time spent with course materials and content. Brown, Killingsworth, and Alavosius (2014) suggested that “behavioral applications in higher education are empirically effective in improving student retention and performance” (p. 132). Boyce and Hanline (2002) acknowledged Interteaching as an innovative arrangement for college classroom instruction that departs from the standard lecture format.

Truelove, Saville, and Van Patten (2013) noted Interteaching impacts student success by identifying specific behaviors to improve performance. In addition to active classroom interaction, students found they enjoyed how Interteaching methods fostered critical thinking and long-term knowledge retention (Saville, Lambert, & Robertson, 2011). Additionally, Saville et al. (2011) determined the behavioral principles underlying Interteaching are applicable in many settings and predicted that one can expect a positive behavioral change in student learning.

Interteaching creates a learning community that enables students to focus on cooperative peer learning (Saville, Lawrence, & Jakobsen, 2012). Students benefit through assignments that encourage collective success through working with others—skills that are beneficial for life (McKeachie & Svinicki, 2006). Saville et al. (2011) stated that Interteaching incorporates frequent non- or lower-stakes testing to allow students to perform better on examinations.

Sturney, Dalfen, and Fienup (2015) described Interteaching as a pedagogy that integrates behavior-analytic methods using focused study guides, stimulated self-regulation, classroom peer interaction, and instructor emphasis on areas students report as requiring clarity. In summary, early research has supported Interteaching as an innovative teaching method. However, a study of the concept in use with nursing students is a notable gap.
Purpose of the Study
The purpose of this study was twofold: to explore student and faculty outcomes and to determine applicability of Interteaching methods for baccalaureate nursing students. The first research question asked whether learning, retention, and student and faculty satisfaction improved with the use of the Interteaching method. The second research question asked whether the effectiveness of this method noted in behavioral science research was applicable to nursing students.

Design of the Study
This quasi-experimental, two-group, posttest-only, mixed methods design considered quantitative and qualitative data. The study reviewed student performance through final scores in coursework, open-ended questions and responses attached to exams, and course evaluations. Data collection occurred during one specific semester in each of 2 academic years, comparing 2 years of student data from senior students in two nursing courses, with faculty using the Interteaching method for one group and traditional lecture-discussion method for the other.

Setting for the Study
The study occurred in a college of nursing at a private university in the midwestern United States. Students were in large classrooms with space to accommodate dyads and triads as they worked on prepguide review and confirmation of responses.

Sample
We used a convenience sample of 289 senior baccalaureate nursing students enrolled in one of two senior nursing courses: Theoretical Foundations of Nursing Research or Management and Leadership in Health Organizations. Multiple sections of these courses were taught by the same instructor via the traditional lecture-discussion method for fall semester 2014 and then taught by the same faculty via Interteaching method for fall semester 2015. Class sizes ranged from 18 to 30 students.

Protection of Human Subjects
The study commenced upon approval from the university Human Subjects Review Board. Course records and rosters accessed from password-protected university systems were used to determine the number of subjects and score averages. No individual identifiers were used; enrollment and mean course scores were obtained from archived course records for comparison data.

Interteaching Intervention Process
Faculty training about the Interteaching method occurred during a dedicated session at a Science, Technology, Engineering, and Math (STEM) conference. The faculty learned how to design a prepguide and implement the process.

The concept of Interteaching was explained within the course syllabus and at the first class session. The first prepguide only was completed in class with a friend to increase comfort with the process. Thereafter, prepguides were completed independently and were available at least 2 weeks prior to class time via an electronic learning management
system (LMS). Each prepguide corresponded with assigned readings. Questions on prepguides included simple definitions, with instructions to relate the terms to course outcomes. Additional complex critical-thinking questions examined nursing actions and prioritization for intricate scenarios. During the course of this study, the prepguide was reviewed, but no changes were made because it was functioning as intended.

Students submitted the prepguide to the electronic LMS 1 hour prior to class. Simultaneously, the faculty released presentation software slides so students could continue class preparation. By waiting to release slides, instructors encouraged students to use textbooks rather than rely on slide outlines to complete each prepguide. During the 3-hour class, faculty randomly assigned students to dyad and triad partnerships during roll call. Students then met with their assigned peers. During this 30-minute, small-group interaction, students shared personal responses to prepguide questions to reinforce deeper understanding of information.

The faculty member also sought formative feedback by circulating the room to hear conversations, clarify misinformation, and answer student questions. Additionally, students completed a “Record of Interteaching” form containing areas for team members’ signatures and requests for additional information.

At the end of the 30-minute dyad and triad group session, or when social chatter began, the faculty offered a 10-minute break. During the break, the faculty reviewed the teams’ Records of Interteaching and tailored the lecture-discussion slide presentation to meet identified needs. This presentation adjustment ensured consistency and accuracy of information that directly reflected the formative student feedback. Boyce and Hanline (2002) noted that “interteaching does not necessarily allow self-pacing. However, because students complete the interteaching records, they do influence which material gets more attention in lecture” (p. 223.) The faculty estimated that, by using the Interteaching method, they decreased lecture time from 90% to 50% of total class time.

Data Collection and Analysis

Quantitative data were collected using several techniques, including summative data of class mean scores from written examinations. In addition to comparison of the mean class semester-examination scores, end-of-semester student evaluations from academic year 2014-2015 courses were reviewed. This same process was then used for summative data collection of the academic year 2015-2016 from the two courses taught by the same faculty.

Quantitative data were entered into the Statistical Package for the Social Sciences–19 (SPSS for Windows, Rel. 19.0., 2010) for computerized analysis. Correlations were calculated, with data secured on the password-protected university computer system.

Qualitative data were collected via open-ended questions on course examinations and course evaluations that included an area for individual comments. Data were analyzed using an established method for content analysis (Weber, 1990). First, similar keywords and short phrases were identified by category on an individual basis by the primary investigator (first author) and a second reader (second author). We used descriptive statistics to determine frequencies of these keywords or phrases. Each author self-immersed in the data to search for emerging themes; these themes were crosschecked by collaborative review to reach consensus.

Results: Quantitative Findings

The course mean scores of all students in both courses were compared through Analysis
of Variance (ANOVA) with review of student data from the 2014–2015 academic year \( (n = 140) \) to student data from the 2015–2016 academic year \( (n = 149) \). Although grades improved from a course mean of 84% (2014-2015) to 88% (2015–2016), no significant relationship was found between results for a traditional method of instruction and those for the Interteaching method with regard to overall earned points for the two courses \( (p = .778, d = 1, F = .080) \). A power analysis using G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) indicated that we had more than adequate power \( (\text{required total } n = 102) \) to detect a small to moderate effect size between groups given our sample size.

Additionally, faculty and course evaluations by students were tallied, and mean scores were compared for the academic year 2014–2015 to academic year 2015–2016. The faculty and course evaluation mean ratings rose from 3.65 to 3.87 on a 4.0 scale of favorable responses on a 5-response-option Likert scale.

**Results: Qualitative Findings**

Responses from open-ended questions identified two themes: (a) **deeper understanding of content**, and (b) **improved study habits**. Examples of student responses that supported the theme of deeper understanding were “Interteaching includes students in the learning process by active participation” and “It helps with understanding material more and allows for better learning in the course.”

Examples of student responses that described their improved study habits included “It [Interteaching] makes us responsible for our own learning,” “It forced me to read before class, then receive clarification,” “It gives the learning responsibility to us students and guides our focus,” and “It gives structure to the course with a guided study method.” Table 1 lists examples of keywords and phrases that supported each of the discovered themes.

Comments from open-ended questions often overlapped; for example, comments to a question comparing the Interteaching method to conventional lecture and discussion and subsequent questions about the most useful and least useful aspects of the prepguides elicited very similar student responses. These responses were brief in nature and, although beneficial to analysis, did not demonstrate high complexity. For the purpose of qualitative analysis, we combined these comparable categories with essentially the same meaning. Selected examples of open-ended questions and frequent responses are listed in Table 2.

**Table 1**

*Keywords and Phrases from Student Responses*

<table>
<thead>
<tr>
<th><strong>Theme 1: Deeper Understanding</strong></th>
<th><strong>Theme 2: Improved Study Habits</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• other points of view</td>
<td>• preparation for class</td>
</tr>
<tr>
<td>• reasoning with peers</td>
<td>• got into the book</td>
</tr>
<tr>
<td>• understand better</td>
<td>• more exposure, study over time,</td>
</tr>
<tr>
<td>• many ways to learn new information</td>
<td>repetition</td>
</tr>
<tr>
<td>• creates discussion about differences in answers</td>
<td>• heard information several times</td>
</tr>
<tr>
<td>• helps to focus important information</td>
<td>• helps with test preparation</td>
</tr>
<tr>
<td>• take ownership of learning</td>
<td>• autonomy</td>
</tr>
</tbody>
</table>
Table 2
Selected Examples of Open-Ended Questions and Frequent Responses

<table>
<thead>
<tr>
<th>Question</th>
<th>Most Frequent Responses</th>
<th>Comments</th>
</tr>
</thead>
</table>
| **The Interteaching method, as opposed to conventional lecture/discussion is...** | • interactive with peers, helps learning, understanding, comprehension  
• makes us responsible for own learning  
• helps to focus studies and prepare for exam  
• helps understanding and easier to remember/retain things  
• forces us into the books | The most common answer was that peer interaction helps learning and understanding. This answer constituted more than one third of total answers provided. The top three answers listed were 60% of total responses to this question. |
| **What I like the best about the Interteaching method of instruction is...** | • hearing others’ views, discussions, sharing  
• prepares for exams, reflection on information  
• makes you look at material before class  
• narrows what to study/key points | Students most liked hearing other students’ views and discussion or sharing. This answer was given by 49% of students. The final three comments listed at left were offered by 14%, 14%, and 12% of students, respectively. |

Table 2 continues
Table 2 (continued)

<table>
<thead>
<tr>
<th>Question</th>
<th>Most Frequent Responses</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If I could change something about Interteaching it would be…</strong></td>
<td>• review prep guides with the whole class or in bigger groups</td>
<td>The most popular answer to this question was to complete prep guides with full class or with a bigger group. This has implications for future use. For example, it may be possible to sometimes complete prep guides individually and other times in assigned small groups, all prior to class. Remaining responses were individual in nature and essentially involved structure (e.g., prep guide in order of chapter content) or process (e.g., worth more points).</td>
</tr>
<tr>
<td><strong>What was the least useful aspect of the prep guides?</strong></td>
<td>• not having a full lecture, limited time</td>
<td>Negative responses were fewer in number than positive responses and reflected common concerns of students, such as discomfort in methods where the teacher does not provide all information needed, fear of incorrect responses, and perceptions that the completion of the prep guide was time-consuming. Implications suggested by these responses include intentional effort to help students understand benefits of a more interactive learning process that may include incorrect answers with subsequent revision and better understanding.</td>
</tr>
</tbody>
</table>
Finally, students sometimes provided specific suggestions for future use of the Interteaching method. Some of their ideas (in addition to those listed in Table 2) included giving examples from the prepguide during a lecture and recording lectures for later review with completed prepguides via the course LMS. Many students also requested a key for the prepguide; however, this would likely be counterproductive as it would provide an answer source for future classes, even with alternating prepguides. Furthermore, more than one correct answer might be possible, which could foster rich discussion when prepguides are reviewed in the classroom together. Negative responses provided opportunities for revision of the process in future courses; however, they did not preclude the benefits of the Interteaching method and the use of prepguides. Overall, 73% of students recommended the use of Interteaching (some suggested other classes where it might be appropriate), and an additional 10% noted they would possibly recommend it.

Positive Outcomes

The Interteaching process resulted in students’ arrival to class expecting group work that required preparation to collaborate with peers, who expected equal contributions to content. The intention of the process was to prepare students prior to class attendance, reinforce new knowledge through peer work, and then affirm knowledge via tailored lectures with identified areas for focus, which indeed occurred.

Quantitative and qualitative data from this study suggested that Interteaching can be an effective mode of teaching for nursing students. The qualitative data indicated that, for these students, Interteaching not only enhanced student-student and student-faculty interactions but also improved student confidence in knowledge; enhanced feelings of perceived responsibility for learning; and added a sense of preparedness for examinations that consistently included multiple-choice and short-answer-response questions related to prepguide critical-thinking questions.

The study findings suggested that the frontloaded faculty work to incorporate the Interteaching method had positive outcomes, such as encouraging students to enter into the textbook to gather information, which increased student confidence about mastery of important concepts. Both themes noted, deeper understanding and improved study habits, as well as specific comments by students (e.g., increased responsibility for learning, improved focus) supported the assertion by Saville et al. (2011) that students enjoyed Interteaching as a facilitator of critical thinking and long-term retention of knowledge.

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Although some results were not significant, a positive trend existed in both students’ average scores in the course as well as students’ evaluations of the course. Additionally, the faculty found Interteaching to be more fulfilling and engaging with students, consistent with other literature that noted college students’ engagement, both in and out of class environments, typically yields more successful academic experiences than those of less engaged (Saville, Lawrence, & Jakobsen, 2012).

Limitations
This study had several limitations. The study was conducted in a single college setting, using a nonprobability, convenience-sampling method. The results are unique to this group of students and cannot be generalized to nursing students in other settings. In addition, frequent examinations, as recommended by Saville et al. (2011), were not possible in the nursing courses of this study due to other semester scheduling demands.

Lessons Learned
Additional faculty feedback. In addition to the data collected for this study, two faculty peers of the primary investigator provided additional feedback about the use of prepguides from separate courses. Data from these courses were not collected because they were not able to include the entire process, including the Record of Interteaching form for real-time faculty updates. However, the peers completed a prepguide efficacy questionnaire to provide feedback regarding prepguide use that offered helpful information and is thus included in our lessons learned. The faculty peers experienced notable outcomes for students and faculty alike, as evidenced by their responses on the aforementioned questionnaire. Examples of faculty comments related to prepguide use included:

- Prepguides give students an opportunity to narrow in to key concepts before they come to class.
- Class discussion with the whole group felt more organized because students had previously written the answers to key questions on the prepguides.
- Interteaching provided students the opportunity to discuss the content with a peer, which helped them problem solve and become more engaged in the material.
- My actual lecture time was reduced because I could focus on key points, knowing the content was reviewed in the prepguides, which helped students learn the critical aspects of the content.
- It was refreshing to ask questions in class and have students actually raise their hands with answers.

Negative comments from faculty about the Interteaching process noted:
- It takes more work up-front to prepare for a new semester in order to create prepguides.
- Students could share prepguide responses, and I think some did.
- Students thought some content was excessively reviewed because of the classroom student-student discussion and group prepguide review.
- It was difficult to walk away from the traditional lecture format.

Reflection on study findings provided additional insight. These were related to both process and outcomes as follows:

1. Random assignment of dyad and triad groups encouraged useful work and prevented social chatter in the classroom. Students verbalized preference for triads rather than dyads because the process is a little quicker and students do not feel singled out if they are not as confident about their understanding of the material.
2. Offering grade points for prepguide completion and accompanying attendance led to higher participation rates.

3. Thought-provoking questions on prepguides fostered content familiarity for short-answer-response test questions.

4. Potential student interactions among cohorts created a need for revisions of prepguide questions to promote integrity in completion.

**Implications for the future.** Advanced planning and preparation of lessons can be a challenge in a busy academic setting of growing expectations for teaching, service, and scholarship. Saville et al. (2006) stated that Interteaching requires increased faculty preparation the first time the format is used. The course faculty acknowledged the intensive nature of the up-front work to prepare prepguides that identified important aspects of reading assignments. Students’ submissions of prepguides should be checked via plagiarism software to ensure students do their own work and avoid copying direct responses from the textbook.

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**Recommendations for Further Research**

The results of this study add to early literature about Interteaching method use, especially as related to nursing students, who had not been previously studied using this method. Populations such as graduate nursing students or students from other health-related or non-health-related disciplines could be studied to determine if the process promotes better critical thinking and mastery of complex information more universally—a likely possibility. Research may also be helpful in a population of middle school or high school students.

Perhaps this study could be replicated with comparison of each examination score rather than only the course score. Additionally, records comparing previous traditional classroom attendance versus attendance using Interteaching can be considered. It would be helpful to ask specific guiding questions related to identified themes in this study to better determine consistency and comparison among other courses using Interteaching. A replicated study could determine if Interteaching might be helpful to freshman students to facilitate smoother transition to a new style of learning, i.e., from rote memorization to critical thinking.

**Conclusion**

In our experience, faculty using the Interteaching method of instruction noted satisfaction because classroom interactions were a refreshing change, with students contributing more to peer and classroom discussions. Students voiced perceived benefits of deeper understanding, improved study habits, and increased sense of responsibility. Thus, Interteaching can potentially enhance satisfaction of both students and faculty due to prepared students in class, improved classroom-level communication, and heightened expectations for content mastery.

The pedagogic diversity of student populations in all disciplines demands innovative methods of teaching to enhance learning and engagement. These needs pose challenges for many faculty who seek strategies that promote student engagement. Interteaching can be adapted to various types of coursework to promote preparation, learning, and retention of knowledge as students prepare for meaningful careers.
References


Examining the Academic Integrity of Current Graduate-Level Education Students
By Susan Szabo, Charlotte Larkin, and Becky Sinclair

Academic honesty has become a hot topic at the university level. The difference between today's environment and that of previous decades is that cheating behavior has apparently become common. With millions of students currently enrolled in online courses, this is an extremely troubling development. The researchers sought to examine perceptions regarding cheating among graduate-level education students working on their master's degree. This study found that even though these students believe cheating and plagiarism do occur at the university level, they do not engage in these behaviors. Additionally, the majority of these students believe they understand the university academic honesty policy as well as the penalties for being caught cheating or plagiarizing.

Introduction

All universities today use a variety of methods to deliver coursework to a plethora of students. Students can choose to take coursework that is offered totally face-to-face; coursework that is web-enhanced, where some of the course is done face-to-face and some is done online; coursework that is totally online with no face-to-face time; or coursework that is totally online with a face-to-face component via Skype or Zoom. For various reasons, the number of students participating in college-level online courses has outpaced all other forms of distance learning (Raines et al., 2011). As a result of the growth in online learning opportunities, some educators are concerned about cheating among graduate-level education students working on their master's degree (Raines et al., 2011).

Although many studies have been conducted about cheating related to face-to-face classes, studies regarding cheating in online courses have been sporadic, and the majority of them are more than 10 years old (Lanier, 2006; Stuber-McEwen, Wisely, & Hoggatt, 2009; Swartz & Cole, 2013; Szabo & Underwood, 2003; Watson & Sottile, 2010). Thus, with so many students taking advantage of various online courses to earn their degrees, it is important to examine current students' ideas about academic integrity relative to cheating and plagiarism specifically.

Gaining insights into academic integrity and how current students view cheating can ensure that educators and administrators are still on the path to ensuring that students will develop good work ethic and become honest employees and community members (Larkin & Mintu-Wimsatt, 2015). This study sought to expand the body of research on academic dishonesty while examining the academic integrity of current online, graduate-level education students in order to determine what such students think about academic honesty.
Online Learning

Online learning is a way of studying without needing to attend courses on campus. Many online learners are adult students looking to advance in their careers and often juggling a full-time job and family responsibilities. Online learning is a valuable commodity in higher education as institutions can extend their academic missions beyond their traditional brick-and-mortar campuses. Additionally, according to research by Clinefelter and Asianian (2016), more than two-thirds of students believed time spent in online academic programs was worthwhile. However, one question continues to be asked: “How much cheating is really happening?”

Perceptions and Academic Honesty

Why are perceptions important? Perceptions reveal what students believe or think about academic dishonesty, and it is one’s beliefs that lead an individual to act (Breines, 2015; Etter, Cramer, & Finn, 2006). Because one’s beliefs and perceptions influence actions, if students or teachers believe it is easier to cheat in an online course, more academic dishonesty is likely to occur. Thus, it is imperative that students’ beliefs about academic honesty be examined.

Academic honesty or integrity means putting one’s own effort into completing required assignments. Having integrity means believing in a set of principles that cause others to trust you to do the right thing. All universities have academic honesty policies that students must follow. These rules help students to have a successful outcome as they complete coursework, theses, and dissertations. Many terms are used to describe academic dishonesty, including academic misconduct or academic fraud. Even though various types of academic dishonesty exist, this study only considered cheating and plagiarism.

Cheating and Students’ Perceptions

The first study conducted on cheating at the university level was completed by Bowers (1964). He found that 50–70% of 5,000 undergraduate students attending 99 different universities engaged in one or more incidents of cheating. LaBeff et al. (1990) conducted a study on cheating in which they considered students from different university settings. They found that universities that were smaller or had a more selective admissions policy had less cheating reported than did larger public university settings. Pope (2007) conducted a study on cheating using graduate participants who were working toward master’s level degrees at different universities. He found that 56% of business students, 54% of engineering students, 48% of education students, and 45% of law students admitted to cheating at least once.

In higher education, the question still remains, “Is cheating more prevalent in traditional face-to-face courses or in online courses?” Some researchers believe less academic dishonesty occurs among students who attend and interact in a face-to-face class (Guyette, King, & Piotroski, 2008; Swartz & Cole, 2013; Wang, 2008). However, other researchers disagree and have found dishonesty in online courses to be the same as found in traditional
classrooms (Grijalva, Nowell, & Kerkvliet, 2006; Kidwell & Kent, 2008; Miller & Young-Jones, 2012; Spaulding, 2009; Sturber-McEwen, Wisely, & Hoggatt, 2009; Watson & Sottile, 2017). Overall, many believe academic dishonesty is widespread (Burke, PoUmeui, & Slavin, 2007; Embleton & Helfer, 2007; McCabe, Butterfield, & Trevino, 2012; Nath & Lovaglia, 2009; Young, 2013), while others are uncertain about the extent of cheating at their own university (Malesky, Baley, & Crow, 2016).

Plagiarism and Students’ Perceptions

“Plagiarism is the wrongful appropriation and stealing and publication of another person’s language, thoughts, ideas, or expressions and the representation of them as one’s own (Stepchyshyn & Nelson, 2007, p. 65). Plagiarism is a complex issue, and many university faculty members have expressed concern that, with technology advances, cutting and pasting appear to be common practices (Macdonald & Carroll, 2006; Spinak, 2013). Nevertheless, plagiarism is not against the law. In fact, in some fields, such as politics and with practicing attorneys, plagiarism is viewed as only a minor indiscretion (Strickland, 2013). However, in academic settings, plagiarism is considered ethically wrong, and students who are caught plagiarizing may be expelled from the university and not allowed to finish their degrees.

Studies have shown that students either do not recognize the concept of plagiarism or have a skewed view of what plagiarism actually involves (Childers & Bruton, 2016; Gove, 2015; Park, 2003; Power, 2009; Zafarghandi, Khoshroo, & Barkat, 2012). Additionally, a study conducted by the Pew Research Center and the Chronicle of Higher Education (Goral, 2012) found more than half of 1,055 university presidents surveyed said they had seen a rise in plagiarism over the last 10 years. However, one study conducted by Fish & Hura (2013) found that college students exaggerated plagiarism occurrences.

Even though the studies presented a mixed view about the concept, plagiarism in the university setting is an important issue that has dire consequences. Accordingly, universities have promoted several ways to help students understand and avoid plagiarism. First, many universities are providing access to plagiarism-detection software such as iThenticate or Turnitin (Ireland & English, 2011). Second, universities also require all faculty members to include in the course syllabus a plagiarism clause to help inform students that plagiarism is against university policy. Third, universities are reporting on their websites the number of incidents that happen yearly (Fish & Hura, 2013). Finally, faculty members are encouraged to help their students learn how to use and write citations correctly (Bretag et al., 2013).

Purpose of This Study

To look further into academic integrity, we investigated both the cheating and plagiarism perceptions and behaviors of master’s-level graduate students of education. The following research questions were explored:

1. What perceptions do graduate-level education students have about online cheating, and have they made use of web-based cheating tools?
2. What perceptions do graduate-level education students have about plagiarism, and
3. What perceptions do graduate-level education students have about university policy on academic honesty and, specifically, about cheating and plagiarism?

Participants and Setting
This study utilized the responses of graduate students enrolled in an online Curriculum and Instruction (C&I) program. These students attended a mid-sized regional state university in east Texas. An email was initially sent to 50 graduate education students seeking their voluntary participation in an anonymous online survey. In the email, students were given a secure web address to visit to complete the survey. Of the 50 students invited, 30 (29 females, 1 male; 15 master’s-level students, 13 doctoral-level students, and 2 alternative-certification students) completed the survey.

Design, Instrument, and Data Analysis
The study used a quantitative design featuring a one-time survey to determine participants’ perceptions of academic dishonesty. The survey instrument was adapted from a study by Larkin and Mintu-Wimsatt (2015) in which the researchers compared cheating and plagiarism perceptions of business undergraduate and graduate students. The responses were tallied, and percentages were determined.

Findings of the Study
The focus of this study was to investigate the perceptions and behaviors of graduate-level education students relative to academic dishonesty. Presented below are the key findings in this study grouped by three academic dishonesty issues: (a) cheating; (b) plagiarism; and (c) knowledge of the university’s academic honesty policies.
Research Question #1. What perceptions do graduate-level education students have about online cheating, and have they made use of web-based cheating tools? The section on perceptions of cheating and use of cheating tools contained six questions (Table 1). Consistent with previous research, the graduate-level education participants in this study believed cheating is easy but that cheating did not occur often. These participants were neutral in their beliefs as to whether more opportunities exist for someone to cheat in an online course versus a face-to-face course. Additionally, the data showed that all the participants were aware of web-based cheating tools, but 97% of the participants reported that they did not use them.

Table 1

Students’ Perceptions on Cheating and Use of Cheating Tools

<table>
<thead>
<tr>
<th>Questions</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>I don’t know (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How frequently do you think cheating during a test occurs?</td>
<td>46.67%</td>
<td>46.67%</td>
<td>6.67%</td>
</tr>
<tr>
<td>2. I believe that students cheat because it is easy to cheat.</td>
<td>64.52%</td>
<td>35.48%</td>
<td>0.00%</td>
</tr>
<tr>
<td>3. There is more opportunity for someone to cheat in an online course.</td>
<td>46.67%</td>
<td>46.67%</td>
<td>6.67%</td>
</tr>
<tr>
<td>4. Are you aware that there are web-based cheating tools you can use to help you on quizzes or writing assignments?</td>
<td>100%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>5. I have used instant messaging through a cell phone or handheld device during a quiz or exam.</td>
<td>3.33%</td>
<td>96.67%</td>
<td></td>
</tr>
<tr>
<td>6. I have used a term paper writing service to complete an assignment.</td>
<td>3.33%</td>
<td>96.67%</td>
<td></td>
</tr>
</tbody>
</table>
Research Question #2. What perceptions do graduate-level education students have about plagiarism, and have they used plagiarism in assignments? The section about plagiarism perceptions and practices contained six questions (Table 2). These graduate-level education students understood plagiarism is a form of cheating and that they need to cite when they copy words from others. However, they believed some students may plagiarize written assignments because their lives are busy or because a student does not think he or she could do a good job completing an assignment.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Is plagiarism a form of cheating?</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>9. Plagiarism is using the ideas and words of someone else as your own work without citing the original work.</td>
<td>Yes: 96.67% No: 3.33% Not Sure: 0.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Copying anything from the Internet/web and using it as my own work is considered plagiarism.</td>
<td>Yes: 93.33% No: 6.67% Not Sure: 0.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Have you turned in work done by someone else as your own?</td>
<td>Yes: 0.00% No: 100.00% Not Sure: 0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Many students commit plagiarism because they are too busy or do not think their work is good enough to do well.</td>
<td>Yes: 50.00% No: 36.67% Not Sure: 13.33%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Research Question #3. What perceptions do graduate-level education students have about university policy on academic honesty and specifically about cheating and plagiarism? The section of the survey concerning university policy and students’ perceptions of instructor awareness had seven questions (Table 3). The data indicated students were generally aware of the university’s policy on plagiarism and cheating, as well as potential penalties. Additionally, the participants believed their instructors were well-informed and continually reminded them about university policies and penalties of being caught cheating or plagiarizing.

Limitations
Several limitations existed in this research. First, the sensitive nature of the questions may have discouraged potential participants from completing the survey. As noted, an invitation email was sent to 50 graduate-level education students, but only 30 responded. Thus, this study had a small population of participants and cannot be generalized to the total population. Second, the survey was a self-report instrument limited by a participant’s tendency to rate himself or herself better or worse than he or she really may be. But, even with these limitations, several interesting findings occurred.

Discussion
The results both supported and contradicted previous research. First, these graduate-level education students believed that cheating is not a big concern as they reported that students rarely or only sometimes may cheat (Table 1, Item 1). This idea contradicted studies that showed cheating as a major concern on university campuses (Pope, 2007; Wang, 2008).

Second, these graduate-level education students did not believe that more opportunities for cheating occur in an online course (Table 1, Item 3). These findings may suggest that these students side with the research that shows dishonesty in online courses is the same as in traditional face-to-face courses (Grijalva et al., 2006; Spaulding, 2009; Watson & Sottile, 2017). Thus, it may not be the classroom design that determines if a student will cheat as much as the student’s beliefs and attitudes toward cheating. This implication reinforces the importance of examining students’ perceptions about cheating (Breines, 2015; Etter et al., 2006).

Third, these graduate-level education students were aware of the many web tools available that enable and perhaps promote academic dishonesty (Table 1, Items 4-6). However, the majority (97%) had never used these tools either to take quizzes or complete an assignment. Additionally, these students knew that plagiarism is a form of cheating (Table 2, Item 7) and knew what plagiarism is (Table 2, Items 9-10) but had never turned in work done by someone else as their own (Table 2, Item 11). Nevertheless, they believed that plagiarism does occur (Table 2, Item 8) because students have busy schedules (Table 2, Item 12). It would be easy for universities to dispel this notion by reporting on the university website the number of incidents that happen yearly (Fish & Hura, 2013).
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>I prefer not to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. I am familiar with my school’s policy on cheating and/or plagiarism.</td>
<td>93.33%</td>
<td>6.67%</td>
<td>0.0%</td>
</tr>
<tr>
<td>14. The severity of penalties for cheating and plagiarizing is</td>
<td>Low: 0.00%</td>
<td>Medium: 26.67%</td>
<td>Very High: 73.33%</td>
</tr>
<tr>
<td>15. The average student’s understanding of university policies concerning cheating and plagiarism is</td>
<td>Very low: 26.67%</td>
<td>Medium: 46.67%</td>
<td>Very high: 46.67%</td>
</tr>
<tr>
<td>16. How often does your instructor discuss policies concerning cheating and plagiarism?</td>
<td>Rarely: 36.67%</td>
<td>About half the time: 26.67%</td>
<td>Most of the time: 36.67%</td>
</tr>
<tr>
<td>17. How often does your instructor discuss policies concerning proper citation/referencing of written sources?</td>
<td>Rarely: 23.33%</td>
<td>Most of the time: 36.67%</td>
<td>Most of the time: 50.00%</td>
</tr>
<tr>
<td>18. My university has information on the Internet/web that can help me understand how to avoid cheating and plagiarism.</td>
<td>Yes: 93.33%</td>
<td>No: 0.00%</td>
<td>I’m not sure: 6.67%</td>
</tr>
<tr>
<td>19. If I am found guilty of academic dishonesty, such as being caught cheating or plagiarizing, it could be placed on my permanent transcript.</td>
<td>Yes: 86.67%</td>
<td>No: 6.67%</td>
<td>I am not sure: 6.67%</td>
</tr>
</tbody>
</table>
Fourth, prior studies have shown that students either do not recognize the concept of plagiarism or have a skewed view of what constitutes plagiarism (Childers & Bruton, 2016; Gove, 2015; Park, 2003; Power, 2009; Zafarghandi et al., 2012). However, these graduate-level education students seemed not only very aware that plagiarism is a form of cheating (Table 3, Item 13) but also that the penalties for cheating and plagiarizing are very high (Table 3, Item 14). This is an important finding, as these participants are current classroom teachers, and their ideas and beliefs could be transmitted to the K-12 students whom they teach. This may mean that K-12 students are learning that cheating and plagiarism are both unethical and wrong and that they need to put the effort into doing their own work as they are completing writing assignments in the K-12 classroom. If these graduate-level education students who are current classroom teachers pass their beliefs to their K-12 students, they will not only help students build good moral character but also help them be successful when they enroll in college or function in life in general.

**Future Research**

Online courses continue to grow, and students’ perceptions of academic honesty change with the culture. Continued research is needed to provide insights into current students’ beliefs about academic dishonesty. Additionally, studies are needed to determine if K-12 educators pass on their positive or negative beliefs about academic honesty to the students in their classrooms.

**References**


A Hidden Treasure: For Students and Beyond

By Janice K. Harder

The author reviews a small but powerful book, co-authored by a DKG member, that can be used as a text or for personal growth in general.


It is rare to come across a college textbook that is a pleasure to read. And yet that is the case with Tokens and Treasures for Life by Dr. Barbara Baethe and Qunoot Almecci (2017). This little book is used in a university freshman student-success seminar to help young people visualize themselves overcoming life’s challenges. But the book goes beyond college and makes inspiring reading for any age group in any setting.

Using the authors’ own life experiences and drawing on an extensive list of sources, such as Napoleon Hill, Zig Ziglar, and Dwayne Dyer, the book guides the reader on a road of self-discovery, self-esteem, and ultimately self-respect. Both authors tell inspiring stories from their childhoods, and each chapter includes riveting thoughts from leaders in the personal-success field. Every chapter ends with a references list that provides ideas for further reading.

The “tokens” in the title are such vital concepts as preparation, purpose, organization, patience, integrity, and passion, just to name a few. The theme of the book is to bring the reader to the realization
that one must *dream* what he or she wants to *achieve* as a first step. But the authors do not leave the reader there; they encourage readers to make measured steps toward their goals. This is done through completion of planning and visualization exercises, as well as by maintaining a written journal during the reading of the book.

The structure of *Tokens and Treasures for Life* even allows each short chapter to stand alone as a reading in the classroom, for a meeting, or as a daily personal inspiration. Take the following advice as an example: “In order to maximize your potential, you must surround yourself with people who bring you joy and avoid those who bring you down” (p. 67). Or be encouraged by these words: “Do not let the fear of anything prevent you from becoming the best that you can be” (p. 49).

Now is the time for a full confession: I have worked with Dr. Baethe for many years and observed her in action in the college classroom. I consider her a friend as well as a DKG colleague, so this is a unique opportunity to review her book. Knowing how she uses this book in her freshman student-success course, I am convinced her students learn more than just “how to study.” I recently saw one of her students carrying this book at the university where Dr. Baethe and I teach. I asked the student if she found the book useful and if she liked it. She replied, “Oh yes, it has been so helpful. I was unsure of what major to declare until I read the first chapter on gaining clarity; now I know what I want to do!”

The author’s students are equipped to succeed, and, in the lofty words of some of the chapters, they complete her course with “The Attributes of Control,” “The Guarantee of Confidence,” and “The Credence for Excellence”! These are treasures for any reader.

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**Dr. Janice K. Harder** is a member of Lambda Gamma Chapter in the DKG Texas State Organization. She is a professor in the Government departments at Lone Star College and at North American University, Houston, TX. katharder@gmail.com
Bulletin Submission Guidelines

Submissions from members will be accepted for review provided that:

- The submission is not being considered concurrently in whole or substantial part by another publisher.
- The Bulletin has exclusive option of possible publication for a period of 6 months following receipt of the submission.
- The author assumes responsibility for publication clearance in the event the submission was presented at a professional meeting or is the direct product of a project financed by a funding agency.
- Authors are responsible for accurately citing all quoted and bibliographic materials and for obtaining permission from the original source for quotations in excess of 150 words or for tables or figures reproduced from published works.
- Co-authors are permitted. At least one author must be a Delta Kappa Gamma member.

Manuscript Preparation

- Although there is a suggested theme for each issue of the Journal, manuscripts on all topics are welcome. The Collegial Exchange is not theme-based.
- Manuscripts should be focused, well organized, effectively developed, concise, and appropriate for Bulletin readers. The style should be direct, clear, readable, and free from gender, political, patriotic, or religious bias. Topic headings should be inserted where appropriate.
- Please see Submission Grid on the following page for specific requirements of the types of manuscripts appropriate for publication.
- Double space the entire manuscript, including quotations, references, and tables. Print should be clear, dark, and legible. Pages must be numbered.
- References should refer only to materials cited within the text. Nonretrievable material, such as papers, reports of limited circulation, unpublished works, and personal communications, should be restricted to works absolutely essential to the manuscript.
- Abbreviations should be explained at their first appearance in the text. Educational jargon (e.g., preservice, K–10, etc.) should be defined as it occurs in the text.
- Place tables and figures on separate pages at the end of the manuscript. Use Arabic numerals and indicate approximate placement in the text.
- Photos, graphics, charts, etc. that may enhance the presentation of the manuscript may be included. Contact the editorial staff (bulletin@dkg.org) for information regarding the use of photos.

Submission

- One submission per author per issue.
- Submit electronically, in Microsoft Word format, to bulletin@dkg.org. Do not submit PDF files. For a manuscript, include definitive abstract, photo of author(s) [see below], and biographical information. Biographical information must include author(s) name(s), occupational position(s), Society and professional affiliations (list offices held), address(es), phone number(s) and e-mail address(es).
- Electronic/digital photo files must be saved in JPG or TIFF format and must be a minimum of 1.5” x 1.5” with a 300 dpi resolution. For photos submitted to enhance text, include caption/identification information.
- For poems and graphic arts, submit name, address, and chapter affiliation. A photograph is not required.
- All submissions will be acknowledged and assigned a review number within 2 weeks. Contact the editor at bulletin@dkg.org if you do not receive timely acknowledgement of your submission.

Publication of Submissions

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- Published authors will receive five complimentary copies of the Bulletin in which their article appears. For evaluation rubrics, please go to the Bulletin page in the Library at www.dkg.org.
### Bulletin Submission Grid

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<tr>
<th>Publication</th>
<th>Submission Type and Description</th>
<th>Word Length</th>
<th>Requirements</th>
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</thead>
<tbody>
<tr>
<td>Journal</td>
<td>Action/Classroom Research: Organized, systematic, and reflective analysis of classroom practice with implications for future practice in teaching and learning.</td>
<td>1,500-4,000</td>
<td>Abstract; documentation; bio; photo</td>
</tr>
<tr>
<td>Journal</td>
<td>Qualitative/Quantitative/Mixed Methods Research: Essentially narrative with nonstatistical approaches and a focus on how individuals and groups view and understand the world and construct meanings from their experiences (Qual)/Gathers and analyzes measurable data to support or refute a hypothesis or theory through numbers and statistics (Quan)/Utilizes both qualitative and quantitative data to explore a research question (Mixed).</td>
<td>1,500-4,000</td>
<td>Abstract; documentation; bio; photo</td>
</tr>
<tr>
<td>Journal</td>
<td>Position Paper/Viewpoint: Defines an issue; asserts clear and unequivocal position on that issue, provides data and references that inform that position, and argues directly in its favor.</td>
<td>1,000-1,500</td>
<td>Abstract; documentation; bio; photo</td>
</tr>
<tr>
<td>Journal</td>
<td>Review of Literature: Presents supporting and nonsupporting evidence to clarify a topic and/or problem of interest and value to educators; synthesizes and critiques the literature; draws conclusions; mentions procedures for selecting and reviewing literature; may include narrative review, best evidence synthesis, or meta-analysis.</td>
<td>1,500-3,000</td>
<td>Abstract; documentation; bio; photo</td>
</tr>
<tr>
<td>Journal</td>
<td>Program Description: Provides an overview and details of a single program in an educational setting. Goals, resources, and outcomes are included. No marketing or promotion of a program is allowed.</td>
<td>1,500-2,000</td>
<td>Abstract; documentation; bio; photo</td>
</tr>
<tr>
<td>Journal</td>
<td>Book/Technology Review: Combines summary and personal critique of a book, Web site, or app on an educational topic or with educational relevance.</td>
<td>400-700</td>
<td>Introduction; documentation; bio; photo</td>
</tr>
<tr>
<td>Collegial Exchange</td>
<td>Classroom Practice/Program: Describes practice or initiative used in a classroom to advance educational excellence</td>
<td>700-1,200</td>
<td>Bio; photo</td>
</tr>
<tr>
<td>Collegial Exchange</td>
<td>DKG Chapter/State Organization Practice/Program: Describes a practice or initiative used by a chapter or state organization to advance the purposes of DKG</td>
<td>700-1,200</td>
<td>Bio; photo</td>
</tr>
<tr>
<td>Collegial Exchange</td>
<td>Viewpoint on Current Issue: Defines and addresses an issue related to education, women, children, or DKG</td>
<td>700-1,200</td>
<td>Bio; photo</td>
</tr>
<tr>
<td>Collegial Exchange</td>
<td>Personal Reflection or Anecdote: Shares a personal experience that provides insight to the human condition, particularly related to educators and women</td>
<td>500-700</td>
<td>Bio; photo</td>
</tr>
<tr>
<td>Collegial Exchange</td>
<td>Inspirational Piece: Provides transcript of speech delivered at chapter, state, regional, or international events</td>
<td>700-1,200</td>
<td>Bio; photo</td>
</tr>
<tr>
<td>Collegial Exchange</td>
<td>Bio and/or Interview: Shares the story or thoughts of a key woman educator or leader in education, women's issues, or children's issues</td>
<td>700-1,200</td>
<td>Bio; photo</td>
</tr>
<tr>
<td>Collegial Exchange</td>
<td>Book Review: Combines a summary and personal critique of a textbook, resource, or book (fiction or nonfiction) related to education or to women and children</td>
<td>400-700</td>
<td>Bio; photo</td>
</tr>
<tr>
<td>Collegial Exchange</td>
<td>Technology Review: Combines a summary and personal critique of an educational application, program, or piece of hardware that is useful in the classroom or that is useful in the life of an educator</td>
<td>400-700</td>
<td>Bio; photo</td>
</tr>
<tr>
<td>Journal or Collegial Exchange</td>
<td>Letter to the Editor: Responds to items previously published in the Bulletin</td>
<td>200-300</td>
<td>Author's name; chapter/state</td>
</tr>
<tr>
<td>Journal or Collegial Exchange</td>
<td>Poetry/Creative Work: Original expressions in any creative format</td>
<td>NA</td>
<td>Bio; state</td>
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**Note:** More detailed explanations of each category may be found on the Editorial Board page at www.dkg.org.