

Annotated Bibliography of Recent Research Related to Academic Advising

Anastasi, J. S. (2007). Full-Semester and Abbreviated Summer Courses: An Evaluation of Student Performance. *Teaching of Psychology* 34(1), 19–22.

Faculty members and administrators often believe that courses taught during abbreviated terms are less effective than the same courses taught during a full-length academic term. One much cited reason, per Anastasi, which also has some support in the research, is that recall is often superior when “learning trials are spaced rather than massed” (p.19); that is, when course content is acquired over a longer period of time, such as a full semester, students remember more of it.

Anastasi put this belief to the test by comparing the academic performance in and teaching evaluations for equivalent full-semester and summer sections of three different psychology courses, Effective Thinking, Memory and Cognition, and Research Methods. In total, data were gathered in 16 different course sections, 9 of which were offered during the full 16-week semester and 7 of which were taught in the summer term. Academic performance was measured primarily with students’ final course grade equivalence; that is, the summer and full-term sections of the same course were comparable because the instructor, teaching style, number of contact hours, assignments, and exams during each term that the courses were offered were kept constant.

Grades were found to be significantly higher for summer sections despite the fact that students enrolled in the full-term sections had significantly higher GPAs. Examination of the course evaluations showed no difference between the two terms with regard to the amount of effort students believed the courses required. Furthermore, summer enrollees more strongly agreed with the statement, “The instructor demanded high standards of student performance.”

Anastasi offered possible explanations to account for the results, which contradict the popular belief that short-term courses are less effective. First, students typically take more courses during the regular academic term and thus may experience “interference” (p. 21) from other course work, countering the positive benefits of spaced learning that occurs over the full term. A second factor that might have influenced the results was class size. Summer sections enrolled an average of 21 students per section, whereas full-term sections enrolled an

average of 40. A third explanation might be differences in the type of student who enrolls in summer versus full-term courses, a variable for which Anastasi was unable to control. Nevertheless, if overall GPA were a predictor variable, full-term enrollees would have been expected to outperform summer-term enrollees because the former had a higher overall GPA. Anastasi concluded that abbreviated courses provide advantages with academic outcomes that are equivalent to or greater than those of regular full-term courses.

Bray, N. J., Harris, M. S., & Major, C. (2007). New Verse or the Same Old Chorus? Looking Holistically at Distance Education Research. *Research in Higher Education*, 48(7), 889–908.

The advent of the World Wide Web and other media led to a widespread belief that technology would completely change instructional methodology. Advances in technology have created opportunities for learning at a distance but has not necessarily revolutionized academic engagement, increased access, or freed the faculty to pursue intellectual endeavors. According to supporters of distance learning, the tools used in virtual classrooms have improved, which will increase their educational effectiveness. Other factors that make distance learning an attractive avenue include the market driven decision to increase higher education enrollment and the technological savvy student of today.

Bray, Harris, and Major sought to discern whether distance education is being used to its full potential and used a review of the literature to conduct the investigation. The discussions are grouped into lessons for practice and for research based on studies of institutions, faculty members, and students.

The authors pointed out issues with the current state of distance education literature. They reported that the literature offers an abundance of descriptive statistics that lack generalizability. Also, the previous researchers tended to make little, if any, distinction between the effects of different delivery systems. Distance education is polycentric in that courses may be Web based, be comprised of a mixed methodology, or be televised. Furthermore, because most universities do not have a distance education division, gathering information for assessing its effectiveness is difficult.

The lessons for practice include developing a strategic plan in which clearly defined goals are outlined. The literature suggests that few schools con-

duct a needs assessment to determine programmatic requirements. Also, tracking enrollment would be instructive in planning for student needs. Employing well-trained staff to service and maintain a distance education program effectively is important. The staff should include, minimally, an administrative manager, an instructional designer, a graphic designer, and a librarian.

The cost for maintaining distance education needs to be adequately addressed. However, the literature fails to provide administrators with clear-cut best practices for evaluating programs and associated costs. By evaluating institutional needs, administrators will be better informed about the costs and benefits of distance learning as well as have a sound foundation to plan a cost-effective program.

Lessons for research include gathering empirical evidence about access. The literature offers little evidence that distance education has increased accessibility. Increased enrollment does not signify new enrollment. Determining the level for resource allocation is difficult due to a lack of distance education divisions. Rather, classes are maintained in their individual departments making management and resource allocation a disparate process. Studying financial allocation is also difficult due to the decentralized structure of distance programs.

The authors unearthed five barriers for the faculty in teaching or designing distance courses. These barriers constitute lessons for practice and pertain to release time, intellectual property, compensation, promotion and tenure, and assurance of technological success. According to the authors, the literature suggests that faculty members require additional time to learn and become competent using new technology, which leads to a lack of motivation to utilize this resource. In addition, a lack of a clear-cut policy on ownership of intellectual property also hinders faculty participation: The course content is developed by the faculty while the format belongs to the institution. Most universities do not have policies that address this issue. The authors promoted the idea of awarding additional compensation for teaching distance courses. Moreover, if the institution values utilizing distance education, it should be reflected in the promotion and tenure process.

Currently, faculty members perceive distance teaching as having little value. Technological success refers to the dependability of the tools used. The absence of alternative instructional methods if the technology fails is a major deterrent for utilizing a distance format. Creating and maintaining a reliable virtual classroom translates into employing appro-

priate staff to ensure technological success.

Lessons for research involve determining the amount of release time and the kinds of related policies that should be implemented to support faculty members involved in distance education. A related lesson for research involves a further investigation into how to motivate the faculty to utilize this resource. The literature is also lacking longitudinal studies that can be used to assess the impact of distance learning.

Lessons for practice with respect to student learning begin with a discussion about better defining the benefits for distance learning with respect to different age groups and associated barriers or assets associated with students who elect to learn in this environment. The authors also suggested that institutions proactively collect student data regarding their experiences with distance education. This way, the institutions can discern student expectations, skill levels, and frustrations.

Some literature suggests that the traditional classroom setting offers educational benefits conducive to learning that distance education has not matched. Student satisfaction is also higher in the traditional setting. Conversely, other works show no significant difference in either learning or satisfaction between the two modes of educating. The key seems to lie in the instructor's ability to maximize student engagement through active learning. Moreover, students must receive timely feedback. Lessons for research about student learning include continual assessment of student outcomes and examination student retention.

Implementing distance-learning course work can be a costly undertaking. Moreover, many institutions are focusing on increased enrollment and retention. If distance education is a way to meet those goals in a cost-effective manner, this article outlines very practical suggestions to ensure a successful distance-education structure.

Bruch, P., Higbee, J. L., & Siaka, K. (2007). Multiculturalism Incorporated: Student Perceptions. *Innovations in Higher Education* 32(3), 139-52.

Noting that multicultural education has had a transformative effect on college curriculum and student experience, Bruch, Higbee, and Siaka sought to discern student perceptions of the phenomenon. They reported that current research on multicultural education has helped to develop student learning outcomes and the idea of "multicultural competence." The research they cited has also served to support and validate the positive out-

comes that multicultural experiences have had on student development. Despite having such positive outcomes, the authors contended that current approaches to studying the impact of multicultural education all but ignores voices of students who still feel marginalized. Such a gap in the literature results in missed opportunities to refine higher education approaches to multiculturalism. The article offers the concept of “incorporative compromise” to refer to the “generalized acceptance of the present situation in which universities pay significant lip service and attention to diversity at the level of including individuals but, at the same time, continue to participate in the myth that currently valued knowledge and the means of accessing it are neutral and equally open.”

The study was conducted in the General College at the University of Minnesota. The General College had prioritized multiculturalism in their mission since the late 1980s. The practical applications of the mission were realized via unit-wide retreats, training, professional development, research support, faculty members, staff and student recruitment, and advocacy and support of visiting scholars. These stated goals and formalized diversity practices made the General College well suited for this inquiry.

The population for this study consisted of first-year students enrolled in a course entitled Writing Society during the spring semester of 2004. The survey instrument was administered on-line. It was organized around 10 guiding principles with associated questions being assessed on a Likert scale. Each section also prompted students to add comments to provide qualitative data. The survey yielded a 65% response rate. Three prevalent themes were drawn from the comments and are the focus of the article: affirmative action, reverse discrimination, and uncomplicated pluralism.

With respect to the discussion around affirmative action, 37% of the respondents expressed frustration of the General College’s perceived unfairness in the multicultural agenda. Forty-six percent believe that diversity is good but affirmative action should be removed so that students are admitted based on neutral standards. The overwhelming majority of the freshman class (77%) was White, which illustrates the tendency for students to feel that traditional standards are neutral. The comments also depict a generalized feeling that diversity is a bonus on a college campus, exists at the expense of education, and harms White students. The comments around reverse discrimination grew out of students learning about White privilege and a feeling that multiculturalism demonizes White students. Uncomplicated pluralism

refers to a situation in which diversity is valued, but privilege is an unseen element, and as a result, the impression that diversity has been accomplished and that continued progress toward equitable access and inclusion is unnecessary.

In conclusion, the authors stated the next step toward development in multicultural education involves addressing the myth that knowledge is neutral. Because knowledge is always contingent on culture and history, education should focus on investigating versions of the truth.

The researchers did not explicitly state the title of the survey instrument used, but they cited the source. Although they gave the breakdown of the freshman class as being 11% students of color, they did not report the differences by race, gender, ethnicity, and so forth with respect to the dominant themes that emerged. The reader is left to wonder how current approaches to multicultural education affects underrepresented students. This article demonstrates the need for universities to do more than add a line about the importance of diversity to their mission statements. Implementing course work and programming as well as developing multiculturally competent staff may address the issues that current approaches are leaving unchallenged. The authors suggested that institutional efforts to create alternative definitions of access is imperative.

Hagedorn, L. S., Maxwell, B., Cypers, S., Moon, H. S., & Lester, J. (2007). Course Shopping in Urban Community Colleges: An Analysis of Student Drop and Add Activities. *Journal of Higher Education*, 78(4), 464–85.

Most colleges and universities allow students to adjust their schedules (i.e., drop and add courses) during a limited period at the start of each academic term. Hagedorn, Maxwell, Cypers, Moon, and Lester called the behavior of dropping and then subsequently adding courses within the drop-add period “course shopping.” Many valid reasons are given for changing schedules, such as time conflicts, incorrect placement, and so forth, but some students may engage in inappropriate course-shopping behaviors or overuse drop-add privileges, which can have adverse consequences for the course shopper, for the university in terms of administrative labor and costs, and for nonshoppers who get shut out of courses by shoppers who take up seats they do not ultimately use. In this study, Hagedorn et al. presented an analysis of course-shopping behaviors from a sample of nearly 5,000 community college students enrolled at nine campuses in the Los Angeles Community College system. Based on the

findings, the authors made several policy recommendations as well as suggestions for further research.

Data from the Transfer and Retention of Urban Community Colleges Student Project (www.usc.edu/dept/education/truccs/) were used for the study. Based on frequency of drop-add transactions and the number of classes switched, Hagedorn et al. identified five categories of shopping or shoppers:

1. Occasional cyclic shopping occurs when a student drops a course and soon after replaces it with another, but less than 30% of the student's courses are replaced.
2. Frequent cyclic shopping is characterized by the same process as occasional cyclic shopping, but more than 30% of the course load is exchanged.
3. Bulk shopping occurs when students sign up for more classes than they expect to complete and drop half or more, but not all, before the end of the drop-add period.
4. Mixed bag shopping occurs when a student engages in both bulk shopping and frequent cyclic shopping.
5. The final category is nonshopping.

Course shopping patterns were examined in five different types of classes based on the Los Angeles Community College district classification: math, English, remedial, occupational, and transferable (to the California State University System) level courses. In some cases, courses belonged to more than one category. For example, an English or math class may also be in the remedial category.

Nearly 40% of the sample engaged in some form of course shopping. Approximately 24% were occasional shoppers and 15% engaged in frequent, bulk, or mixed-bag shopping and had lower GPAs and lower course completion ratios than occasional shoppers and nonshoppers. That is, students who were more likely to engage in drop-add behaviors also performed less well academically and were more likely to withdraw from or fail their other courses.

Drop-add patterns by each type of shopper for each type of class (math, English, remedial, occupational, and transferable) are complex. Full details are presented in tables in the article. However, some patterns stand out for discussion. Math courses were the most-often dropped classes by frequent and occasional shoppers while remedial classes had comparatively lower drop rates by these two groups. When English and math classes were dropped, in almost two thirds of the cases, they were not

replaced by the same type of class.

To explore relationships between demographic variables and types of shoppers, the authors performed correlation analyses, but many of the relationships turned out to be minimal. Table 2 in the article presents percentages of each type of shopper by ethnic background, gender, age (younger than 30 years old), self-reported high school GPA, number of hours currently employed, and whether the participants' mother had attended college.

While the authors feel that some shopping is beneficial to students, they recommended that colleges take proactive measures to reduce the need for frequent shopping to prevent misuse and overuse. They feel it is "clearly better for students to make initial wise choices in the enrollment process" (p. 481). The authors proposed that instructors post syllabi and course requirements on the Internet to give students a chance to preview courses prior to enrollment. Another solution they proposed is to increase contact with students who drop and add courses; however, as the authors acknowledged, this is labor intensive. Instructors can reduce the burden on counseling staff by consulting with students who drop their courses or wish to add them. A third measure proposed by the authors would be to either impose a limit on the number of allowable drop-add transactions or create an alert that notifies advisors when a student engages in overly frequent shopping.

This study is a quantitative analysis of students' course shopping patterns. Further research proposed by the authors includes finding out from students why they shop, looking for means to encourage students to replace dropped courses with the same category of course, and investigating the informal and formal networks students use to inform their course shopping.

Harrison, T. R. (2007). My Teacher is so Unfair. *Conflict Resolution Quarterly* 24(3), 349–68.

Student-faculty conflicts are a common occurrence in higher education. A fair amount of research has been dedicated to exploring the structures and processes, such as use of the Ombuds Office, for handling conflict resolution at colleges and universities. Likewise, considerable information is available on the frequency and types of disputes. In this study, by contrast, Harrison focused on student perspectives on conflict resolution at their place of study. Participants were recruited from a required general education course at a large southern university. In exchange for extra credit, 308 students completed an anonymous survey about their expe-

periences with faculty-student conflicts.

Harrison's first line of inquiry related to contexts for conflict. Nearly one third of the sample confirmed having had a conflict with an instructor and had taken steps to resolve it. Most of the conflicts occurred in smaller classes and in required courses. Nearly one half of the conflicts were experienced in courses that were required for students' major. Students reported a higher percentage of conflicts with professors (63%) than with teaching assistants (24%). Another 12% were unsure of the status of the instructor with whom their conflict was experienced.

The most cited reasons for conflicts were incompetence on the part of the professor, receipt of an unfair grade, disliking the instructor's personality, feeling like the instructor was biased against the student, and feeling harassed by the professor. Other areas of conflict included unfair tests, deviations from the syllabus, a conflict in exam schedule, and teaching style. A small percentage (2%) of the sample indicated "other" types of conflict (p. 354). Another finding of note is that 4% of the students who experienced a conflict with an instructor reported taking another course with that instructor.

Harrison's second research question related to processes and outcomes of pursuing conflicts. Students were asked to indicate from whom they sought help and in what order. In other words, students might begin with one source of help, for example, a classmate, but then consult with the instructor or another university official. Alternatively, students might approach the instructor, the Ombuds, another university official, or their parents first. Per the results (the full ordered matrix is included in the article), students "overwhelmingly approached friends and classmates as their first step in pursuing a conflict" (p. 355), while smaller numbers approached their professor first. Fewer still approached another university official (defined as other professor, department head, or program director) or their parents.

Only 4 of the 93 students who reported taking steps to resolve a conflict indicated that they began the resolution process at an official grievance office such as the Ombuds office or appeals board. However, 20% of the students with conflicts reported eventually pursuing official grievance resolution avenues after first consulting with others. Slightly less than one half of the respondents (48%) had heard of the Ombuds office most often from friends or others who had used the service. These results were obtained even though at the institution where the study was performed the Ombuds office

"promotes its functions across campus through speaking at freshman orientation courses, through the campus newspaper, and through E-mails to the campus community" (p. 353).

As far as outcomes, 36% of the respondents indicated that nothing changed as a result of pursuing a conflict, while 18% reported a grade change, and 9% reported dropping the course. Nine other outcomes were reported with occurrence rates of 1 to 5%. Slightly more than one half (51%) of the respondents indicated being very or somewhat satisfied with the outcomes while another 36% reported the opposite. Satisfaction levels with the process of pursuing a grievance followed a somewhat similar pattern to that reported for outcomes.

Harrison investigated students' reasons for deciding to pursue or not pursue a grievance. Students indicated they would most likely pursue a grievance under three conditions: if they received a grade they felt was unfair, if they felt harassed by the professor, or if they felt the instructor had a personal bias against them. Six percent of the respondents indicated they would not pursue a conflict for any reason. The most common reasons given for not pursuing conflicts were the following: not expecting a positive outcome, fear of retribution, amount of effort required, not knowing how to do so, and believing professors had too much power. High percentages of students were also concerned with their standing in the department and their relationships with other professors.

Finally, using cross-tabulation statistics, Harrison investigated whether past conflict pursuits and outcomes influence future decisions to pursue complaints and whether gender differences affected conflict experiences. Students who pursued a conflict in the past were significantly more likely to pursue it again if they felt harassed, had conflicts with exam times, had personality conflicts, or thought the instructor was incompetent. Among those who had a prior history of pursuing a conflict, neither degree of satisfaction with the outcome nor satisfaction with the process was significantly related to decisions to pursue future conflicts.

Cross-tabulation of the responses by gender indicates no significant differences in the nature of conflicts chosen for pursuit. Females were significantly more likely to talk to their parents about the conflict than were males. They were also significantly more likely than males to initiate a complaint in the future if they felt harassed or experienced a conflict with exam time. Males and females were equally likely to experience conflicts they wanted to pursue but did not. Females were significantly

more concerned about risking their standing in the department than were males.

In Harrison's view, failure to resolve conflicts adequately can have adverse consequences for students and the institutions that serve them, and Harrison's recommendations include teaching professors conflict management strategies and means for more open communication. The author also called for better, more active advertising of forums for dispute resolution and suggested that such information could be provided on course syllabi.

Krause, K. (2006). Supporting First-Year Writing Development Online. *JGE: The Journal of General Education*, 55(3), 201–20.

One key to high-quality learning experiences for undergraduates is their successful integration into the institutional culture of their university, including the academic culture. Yet students do not always begin their college career with the requisite skills for successful academic integration. Consequently, universities often offer various support resources to facilitate this process with both face-to-face formats, and in increasing numbers, formats that make use of information and communication technologies (ICTs) (p. 201).

Krause investigated first-year students' use of and reaction to one such technological resource, an on-line writing support resource developed and made available to students through Webct, a password protected, Web-based course management tool. The on-line writing resource tool, developed by Krause in collaboration with other colleagues, was used in conjunction with a first-year foundation course in behavioral sciences at a public university in Sydney, Australia. The resource was divided into three parts. The first contained course-specific information such as to how to format and submit course assignments. The second consisted of an interactive writing tutorial program that dealt with writing strategies such as interpreting writing assignments, using style manuals, and avoiding plagiarism. Ten tutorials were included. They entailed reading information on a topic, answering questions about the information just read, and then reading sample responses or advice from "an assessor with experience in grading student assignments" (p. 205). The third part of the on-line writing resource consisted of sample graded student essays in various disciplines. Before students were allowed to see the "grader comments" window (p. 205), they first had to evaluate and analyze the essays themselves and answer critical questions about the essays.

All students enrolled in the foundation course in behavioral science had access to the Webct writing resource. Its use was encouraged and modeled during the first class lecture. At the beginning of the semester, students were invited to participate in a study to evaluate the tool and to share their experiences with it. Eighty-nine students of 229 (39%) agreed to participate. One hundred percent of participants from preprogram to postprogram survey were retained in the study. Ninety-eight percent of the participants were female, which the author attributed to course and program demographics and Australian college demographics. Krause added that females are significantly overrepresented in studies of first-year Australian students.

For purposes of analyses, participants were divided into three age groups: school leavers (16%), 20 to 24 year olds (37%), and nontraditional students (46%). School leavers, aged 17 to 19 years, went directly to college after graduating from high school, and the nontraditional group included students who were older than 25 years. The mean age for the entire sample was 22.3 years.

Krause's primary goals were to investigate the nature of first-year students' interactions with Web-based writing support and to ascertain whether perceptions and interactions would differ according to the participants' age group. These questions, in turn, have implications for the use of ICTs to enhance the quality of teaching and learning in the first year. Krause used a pseudo experimental one-group pretest–posttest design to gather data. Two surveys were administered, a preprogram questionnaire in the third week of the semester after students had received a grade on their first written assignment, and a postprogram questionnaire at the end of the semester after students had received a grade and feedback for a major writing assignment. The surveys included both Likert-type and open-ended questions.

Over a 6-week period, students spent an average of 4 hours using the writing support tool; some students used it for 9 or more hours. Compared with school leavers, nontraditional students spent significantly more time using the resource. Time spent by these groups was 3.47 and 4.33 hours respectively. School leavers tended to take a "just-in-time" (p. 208) approach to the on-line resource, accessing only the sections of the program that seemed to address a problem or question they were currently experiencing. By contrast, nontraditional-aged students tended to use a "just-in-case" approach, working through the interactive tutorials more systematically.

Krause compared students' self-reported writing and research skills and writing anxiety levels before and after they used the on-line writing resource. Skill areas included abilities such as understanding writing assignments, researching a topic, planning the essay, selecting relevant information, avoiding plagiarism, using APA (American Psychological Association) style, revising and editing, among others.

The full set of 13 skill areas along with preprogram and postprogram measures are presented in Table 1 (pp. 209–10). As with time spent and approach, results varied by age group. On more than one half of the skill areas examined, school leavers reported a decline from preprogram to postprogram measures, while the 20- to 24-year-old group and the nontraditional students reported improvements in all skill areas measured. Krause speculated that the self-paced assistance may have boosted the older learners' confidence and at the same time served as a "diagnostic tool" (p. 216) for the younger learners, which drew attention to writing and research skill deficits. Whether students felt they improved in the skill areas or not, significant improvement was made in mean assignment grades from the first to second measure. All three age groups showed a decline in self-reported anxiety levels from the preprogram to postprogram measure, but the changes were not significant for any of the groups.

As far as perceived usefulness of the resource, most students rated it favorably, but once again, age differences emerged, with older students rating the resource more highly. The aspects of the resource students found most useful also varied by age, which Krause said might have its roots in the just-in-time versus the just-in-case approach. Younger students found the referencing, paraphrasing, and using APA tutorials to be the most useful whereas the nontraditional group found the sample assignments and rater feedback to be the most helpful aspects.

Open-ended comments also evidenced students' general satisfaction with the resource. Students particularly liked being able to access it at any time. Even so, "the overwhelming majority of students rejected the option of replacing face-to-face classes with an online resource such as the one under investigation" (p. 213). Students indicated wanting face-to-face interaction when they encounter "real difficulties" (p. 317) and see on-line support as a good adjunct or supplement, but not as a replacement for face-to-face contact. The social aspects of face-to-face interaction with peers and faculty members were particularly important to nontraditional-aged students, and a number of stu-

dents in the school leaver group seemed to feel that better learning takes place during face-to-face interactions. The alternative to providing solely face-to-face or solely on-line support is to offer a combination of both. Half of the nontraditional-aged students preferred this alternative and 41% of the school leaver group favored a combination of face-to-face learning with on-line supplemental resources. Convenience, flexibility, and self-paced learning were common themes for supporting a combination of on-line and face-to-face learning or the exclusive use of on-line learning, which was preferred by a very small percentage of students.

Although the reaction to the on-line writing resource was favorable, Krause stressed that students' preferences for face-to-face interactions should not be ignored. Findings showed students' interactions with the Web-based writing support tool to be "complex and varied" (p. 215). Krause recommended that in considering strategies for improving teaching and learning, attention should be given to how students best learn. Information and communication technologies may not necessarily be the "panacea they are so often thought to be" (p. 218). Krause called for continued monitoring of the ways technology can be used to build learning communities and to enhance student learning but cautioned policy makers to pay attention to settings in which ICTs may not be the best means to accomplish these goals. Student voice should be considered in the process of developing supports and implementing policies.

Madaus, J. W. (2006). Employment Outcomes of University Graduates with Learning Disabilities. *Learning Disability Quarterly*, 29(1), 19–31.

The number of students with learning disabilities (LDs) attending institutions of higher education has been steadily rising and has more than tripled since 1978 (American Youth Policy Forum and Council on Educational Policy, 2002). Yet scant research has been conducted as to the employment outcomes of college graduates in this population. In an effort to address this information gap, Madaus surveyed nearly 1,500 college graduates who had registered a LD with their appropriate college office.

The survey, adapted from an instrument used by Madaus et al. (2001, 2002) contained four sections that asked respondents about their a) demographic characteristics, b) transition to a career as a person with a disability, c) job satisfaction, and d) employment self-efficacy. The sample included 1,436 graduates from four universities. Slightly more

than one half (51.1%) of the respondents were male. Ninety-two percent of the population was White, non-Hispanic. Approximately 11% of the sample reported other disabilities in addition to their LD, and 1.2% reported that English was their second language. Additional demographic information is provided in tables in the article.

Madaus found that overall responses indicated a “generally positive picture of the post-school outcomes for a sample of university graduates with LD” (p. 28). Employment rates, levels of income, and levels of benefits reported by the participants were comparable to workforce averages in the United States. Per the data, college graduates with LDs, on average, seem to fare better than those who do not attend an institute of higher education. Seventy-five percent of the participants reported being employed full-time (35+ hours per week); 5% were employed between 21 and 34 hours per week; 6% worked less than 20 hours per week; and approximately 12% were unemployed. Caring for children and being in school were commonly cited reasons for part-time employment and unemployment. The three most reported annual salaries were \$30,001 to \$40,000 (19%), more than \$90,000 (17%), and \$40,001 to \$50,000 per year (16%). Of the respondents who were employed, the vast majority (76%) reported receiving full benefits, 10% reported receiving partial benefits, and 14% reported receiving no benefits.

Although employment rates, salaries, and benefits for graduates with LD were comparable to those of graduates without LD and job satisfaction was reportedly high, in Madaus’s view, low disclosure rates (only 55%) coupled with the fact that nearly three quarters of the participants (73%) felt their LD impacted on their work cause concerns. (Disclosure means letting an employer or coworker know about the disability.) While 61% of the nondisclosers saw no need to disclose or felt they did not need special accommodations, other reasons for nondisclosure suggest a strong concern for negative consequences. Thirty percent of nondisclosers feared a negative influence on their employer; 29% were concerned with negative influences on coworkers; 20% were concerned with job security; approximately 4% indicated that they did not disclose currently due to problems resulting from a previous disclosure. More details on disclosure and requests for accommodations are included in tables in the article.

Limitations indicated by Madaus include the overall low response rate (35%) and the “overwhelmingly white” (p. 29) sample. As a function of

sampling procedures, participants were drawn solely from institutions that offer support programs for students with LDs. The author cautioned against over-generalization but nevertheless found the data informative for transitions planning. The data show that postsecondary education is equated with positive employment outcomes for students with LDs. Therefore, transitions planning in middle and secondary schools should include helping students prepare for college-level work. The planning needs to be informed by empirical data. Madaus recommended longer term follow-up studies of employment experiences of graduates with LD as well as an exploration of outcomes for different populations of college graduates with LD.

Madigan, E. M., Goodfellow, M., & Stone, J. A. (2007). Gender, Perceptions, and Reality: Technological Literacy among First-Year Students. *ACM SIGCSE Bulletin*, 39(1), 410–14.

In the 21st century, information and communication technology (ICT) skills are essential. They enable individuals to use computers and their applications to “achieve a wide variety of academic, work-related and personal goals” (p. 410). While there may be a perception that today’s first-year college students possess a “high degree of technological sophistication” (p. 410), there is evidence to suggest that this perception is not completely accurate. Moreover, research demonstrates gender gaps in ICT skills. The present article by Madigan, Goodfellow, and Stone is comprised of two studies of first-year college students’ ICT skills.

In the first study, all students attending a testing and advising program at two branch campuses of a large university were invited to participate in a survey on ICT skills and access. For the skills section, students were asked to rate their own knowledge using a Likert scale in four domains: a) basic computing, which included activities such as installing and removing software; running virus scans; copying, editing, and moving files; and so forth; b) using software applications such as word processing programs; c) using the Internet for searching, E-mail, instant messaging, chats, and the like; and d) performing research functions with computers such as searching library databases. The response options ranged from 1 = *no knowledge* to 5 = *expert knowledge*.

In addition to the questions regarding knowledge and skills, participants were asked about their access to computers and the Internet at home and at school. The response rate was 57.6% (of 502 students). However, the authors stated that an unspc-

ified number of respondents were disqualified because they were younger than 18 years old at the time of the study.

Results of the first study indicate significant differences between males' and females' self-perceptions of ICT knowledge in only one domain, basic computing, with mean ratings of 4.3 by males and 3.9 by females. A closer examination of the basic computing skills domain showed that males rated themselves as more skilled at installing and removing programs as well as at copying, deleting, and moving files. In the Internet domain, while overall differences in self-perceived skills by males and females were not significant, in general, males rated themselves more knowledgeable for almost all of the items. For two of these, adding book marks to a browser and downloading files from the Internet, the differences were significant. In the research domain, the mean self-rating by males and females alike was 3.2. In the applications domain, mean self-ratings were 4.4 and 4.3 for males and females, respectively.

As far as access, nearly 91% of the respondents reported having computers at home, and 84% reported having access to the Internet at home. Access at school was considerably less, 37.7% for both computer and Web access. Females reported significantly less access to computers than did males: 89.0% compared to 96.9%.

In the second study, the authors investigated "actual" (p. 412) ICT skills as compared to reported knowledge. Students were asked to write a research paper that made use of 10 ICT skills from the applications, Internet, and research domains. Due to

security concerns, the basic computing domain could not be assessed in this second study. Some of the skills required for completion of the research paper included providing references, formatting the paper using a style manual such as that furnished by the American Psychological Association or Modern Language Association, saving a document in rich text format, and E-mailing a file to the instructor.

Participants were recruited from 10 sections of a first-year seminar course. The response rate was 19%. The authors acknowledged that in both studies, students with less computer skills may have opted not to participate. Results from the second study showed both male and female students were less skilled in ICT than they had perceived themselves to be. There were no significant differences between males and females with regard to performance on the assignment.

Madigan, Goodfellow, and Stone suggested that the continued "confidence gap" (p. 413) between males and females with regard to ICT skills has implications for both academic performance as well as recruitment and retention of females in computer science and information science fields. Females are underrepresented in these fields perhaps because they chose not to enroll or dropped out due to a lack of self-efficacy. Lack of confidence in certain technological domains may limit females' choice of majors and careers. The authors made a plea to motivate female students to "take on challenges to increase their skills and knowledge in what they believe to be a male-dominated domain" (p. 413) and called for classroom research on how to accomplish this goal.

The bibliography is compiled by Jessie Carduner and Barbara Miller.