

# Teaching Online and Blended Courses: Perceptions of Faculty

Joseph Madaus, University of Connecticut

---

**Abstract:** With more postsecondary classes being taught online or in a technology blended format, faculty face new challenges in regard to planning their courses, delivering course content, and engaging students. This article presents the results of interviews with 25 faculty members from five postsecondary institutions about the advantages and challenges presented by online and blended courses, as well as specific techniques used to teach in the digital environment, and methods to enhance communication with students. Specific recommendations for faculty contemplating, or preparing to teach electronically are also presented.

**Keywords:** Online courses, blended courses, faculty perceptions

Online and technology blended courses are among the fastest growing trends in postsecondary education. In their analysis of responses from 2,590 postsecondary institutions, Allen and Seaman (2010) reported that 5.6 million students, typically undergraduates, were enrolled in at least one online class during the fall, 2009 semester. This represents one in three students total, and an increase of 21% from the 2008 academic year. In fact, the number of students enrolling in online courses increased 19% from 2002 to 2009, a number that greatly outpaces the less than 2% overall growth in student enrollment (Allen & Seaman, 2010).

As the number of electronic course offerings increases, the literature points to a divide between faculty who are willing to learn and utilize new technology-based pedagogical approaches and those who are unwilling to dispense with their established pedagogies for new methods of teaching (Georgina & Olsen, 2008). According to the literature, there are five key concerns faculty hold regarding teaching online, including: (1) trepidation relating to issues around technology; (2) concerns regarding greater workload; (3)

apprehension over the lack of face-to-face communication with students; (4) worry about the lack of student autonomy; and (5) concerns over the quality of online courses (Allen & Seaman, 2006; Conceicao 2006; El Mansour & Mupinga 2007; Gahungu, Dereshiwsky, & Moan, 2006; Harker & Koutsantoni, 2005; Hathorn & Hathorn, 2010; Hensley, 2005; Koenig, 2010; McGee & Diaz, 2007; Mills, Yanes, & Casebeer, 2009; Murphy & Cifuentes, 2001; Oblinger & Hawkins, 2006). Each of these areas of faculty concern is summarized below.

## Issues with Technology

Faculty adoption of technology is influenced by perceptions of the effectiveness of the technology (Zhao & Cziko, 2001). According to a survey of 24 faculty conducted at Chicago State University (Gahungu, Dereshiwsky, & Moan, 2006), there is a lack of knowledge, skills, and direct experience by faculty with the necessary technology to teach online. The lack of direct personal experience appears to create resistance to participating fully in online instruction

(Mills et al., 2009). Additionally, although faculty may receive little or no support to design and implement online courses, few faculty members possess the instructional design skills necessary to design effective online or technology blended courses (Oblinger & Hawkins, 2006). This can be the result of multiple factors, including a lack of administrative support, time constraints, and lack of institutional commitment to specific technologies (e.g., hardware or software) (Irani & Telg, 2002; McGee & Diaz, 2007). The lack of support of faculty and expertise by faculty with technology to develop and implement an online course can lead to feelings of isolation (Georgina & Olsen, 2008; Li & Akins, 2004).

Faculty may experience additional frustration when incorporated technology fails or provides access issues for students (Thomas & Parker, n.d.). Technology is not always user-friendly; for example, some software will not open in earlier versions or across multiple platforms (e.g., Windows and Mac, or Microsoft and Freeware). Although students' experience and adoption of technology generally outpaces that of faculty (McGee & Diaz, 2007), students do not possess an innate knowledge of how to use all technology (Lorenzi, MacKeogh, & Fox, 2004). Furthermore, students tend to perceive their own technology skills as far greater than their actual skills (Grant, Malloy, & Murphy, 2009), which can create additional frustrations for faculty when attempting to assist students when issues arise.

### **Increased Workload**

Several researchers have noted that many faculty are concerned about the workload involved in planning, designing and teaching online courses (Allen & Seaman, 2006; Conceicao 2006; Hensley, 2005; McGee & Diaz, 2007). In fact, Shelton and Saltsman (2006) observed that this is one of the greatest issues impacting faculty participation in digital teaching. Transitioning from teaching a traditional face-to-face course to teaching in the online environment is not a simple task for most faculty members (Grant & Thornton, 2007). It is not enough to post traditional material to a course web site; instructors must find ways to get students to engage with, analyze, and reflect on course content within the digital environment (Georgina & Olson, 2008). As Lindsay (2004) observed, "Transforming assignments, texts, and other course

materials into an online environment can be difficult" and time consuming (p. 16). Additionally, once planned, the digital format makes a course "omnipresent"; meaning it requires faculty to rearrange their schedules to respond to the continuous posts, emails, and inquiries that are sent at all times of the day, everyday, which is time consuming (Conceicao 2006).

### **Interaction with Students**

The lack of in-person contact with students also influences faculty perspectives of teaching in the digital learning environment (Koenig, 2010). In an online course, there is an inability to perceive students' body language, initial responses or reactions to content, as well as a lack of visible, real-time engagement (Conceicao, 2006; El Mansour & Mupinga, 2007; Gahungu, Dereshiwsky, & Moan, 2006; Mills et al., 2009). Compounding this issue is that online classes require the building of a virtual learning community, which entails much more and more frequent feedback than in face-to-face courses (Baglione & Nastanski, 2007; Hathorn & Hathorn, 2010; Murphy & Cifuentes, 2001). Thus, it can be a challenge learning to communicate effectively in this electronic medium (Lindsay, 2004).

### **Student Autonomy and Motivation**

The digital learning environment requires that faculty continually keep students focused, on-task, and engaged (Conceicao, 2006; Hathorn & Hathorn, 2010), due to the fact that faculty perceive difficulties in student autonomy and sustaining student motivation in online and technology blended courses (Harker & Koutsantoni, 2005; Murphy & Cifuentes, 2001). It is observed that students procrastinate and lack the time management skills to pace themselves to complete assignments on time in online courses (Gahungu, Dereshiwsky, & Moan, 2006). Some faculty members perceive that students also lack effective communication strategies to correctly express their ideas and needs in a digital format (not using proper spelling and grammar in online communication, incomplete sentences, unawareness of netiquette) (Gahungu, Dereshiwsky, & Moan, 2006).

## Quality of Online Courses

Faculty members have also raised questions about the quality of education in the digital learning environment. Results from several surveys indicated that many faculty perceive online courses as an inadequate substitute for face-to-face, traditional courses (Allen & Seaman, 2006; Gahungu, Dereshiwsky, & Moan, 2006; Mills, Yanes, & Casebeer, 2009;). This perception appears to be influenced by several factors, including a lack of confidence in technology to be an effective instructional medium (Mills et al., 2009), a lack of knowledge and research-based studies on how technology impacts learning in the digital environment (Koenig, 2010; Mills et al., 2009), and issues involving intellectual property and copyright (Oblinger & Hawkins, 2006; Passmore, 2000).

## Rationale for the Study

The intent of this study was to examine the perceptions of college and university faculty related to the advantages and challenges offered by online and technology blended courses. Additionally, the investigation sought to elicit information related to methods used by faculty in planning, delivery of content, and assessment of students in their courses. As noted in this literature review, researchers, in several existing studies, have examined a specific perception held by faculty of teaching online. However, in this study, information was elicited related to a wider range of perceptions held by faculty regarding advantages and challenges to teaching and engaging students in the digital environment. Moreover, most other studies have been focused on faculty from singular institutions. The present investigation worked with faculty across several states, from several different types of higher educational institutions (a community college, a liberal arts college, state universities, and a Research 1 institution).

## Method

### Interview Sample

The research team requested nominations of faculty to interview from contact people (disability services, Institutes for Teaching and Learning, Instructional design teams, faculty development offices) at each institution. In total, 73 faculty members were nominated and were then emailed directly and invited

to participate. Twenty-six faculty members responded, and 25 from five schools were interviewed.

### Interview Protocol

In order to gather information related to faculty experiences and perceptions about online and technology-blended courses, an interview protocol was developed. The interview (see Appendix A) began with three “icebreaker” questions, followed by two general questions about perceptions of differences, advantages, and challenges to teaching in a digital medium versus face-to-face, and about technologies used. The remaining questions were clustered around course planning, content delivery, assessment of learning, students, and professional development related to teaching online. The complete protocol was initially reviewed and refined by the authors and three other professionals, one of who was from an external institution. It was again reviewed after piloting with two faculty members at one of the participating institutions. One of three graduate assistants who were trained by the principal researchers conducted each interview, and a guide of terms (see Appendix B) was created to ensure consistency across interviews. Thirteen of the interviews were conducted over the phone and 12 were conducted face-to-face; each interview lasted between 20 to 50 minutes.

### Data Analysis

Each recorded interview was transcribed completely by the graduate assistant who conducted the interview. The authors then read each transcript independently and a set of common themes and key words that emerged were developed. The transcripts and the key words were entered into NVivo9, a qualitative software program to provide additional frequency analysis of the data. The resulting NVivo reports were again coded to align the key words with supporting comments by the interview participants.

## Results

The results will be presented according to the main themes that emerged in the interview data. First, the demographic information about the sample will be discussed, followed by faculty observations related to: (1) technology; (2) workload; (3) interaction with students; (4) student autonomy; and (5) quality of courses

with an online component course organization and planning, content delivery and student assessment, and communication and engagement with students. Within each of these areas, advantages and/or challenges will be described as presented by the participants. Finally, suggestions from the faculty to peers who are planning to teach online or blended courses will be presented.

### **Characteristics of Faculty Respondents**

The interviewed faculty represented 17 different unique disciplines, while an additional six reported being affiliated with multiple disciplines. Eleven members of the sample reported teaching blended courses only, five had taught only online courses, and nine reported experience teaching in both formats. Seven faculty members had 6-10 years of experience teaching, while fourteen had 11 or more years of experience. Fourteen of the faculty reported having experience with students with disabilities in their courses, and 13 reported providing accommodations to students because of a disability. In terms of professional development in teaching online and blended courses, 14 of the faculty members reported using multiple sources, five reported attending a workshop, four described themselves as self-taught, and two stated that they looked to peers for help.

### **Issues with Technology**

The primary emphasis related to technology from the participants was not on problems related to technology, but rather the need to focus on the pedagogical reasons and objectives for teaching online and blended courses, instead of on the technology alone. One participant stated, “you need to have a good pedagogical reason... You can’t just have technology because it’s shiny and new and sexy...I always asked, ‘does this make good pedagogical sense? What is my learning objective?’ That’s got to be your first question.” Another described conversations with peers who are preparing to teach electronically, stating:

The questions I ask them are: ‘what are your goals and objectives for the course? What is it that you want students to know and be able to do at the end of the course ... then I would talk to them about the different kinds of technologies ... I always ask about pedagogy first not about the

technology.’”

This idea was summarized by one participant who stated, “Let the technology support that journey as opposed to driving that journey.”

Whereas the literature points to issues with faculty knowledge of technology, and in keeping up with students, some of the respondents instead commented on students’ lack of knowledge of and facility with technology. One professor observed, “The non-traditional students that are a little older that are not as tech-savvy. They take a lot longer to get into the technology” which requires “more time teaching the students that are non-traditional how to use it”.

### **Increased Workload**

Just as was found in the literature, the amount of time and planning required to teach online and blended courses was the most commonly cited concern (noted by 17 participants). As one faculty member stated, “to do it right, you have to put in an awful lot of time front ending it so you have the course completely thought out and designed up front”. Another observed:

You really have to write down each and every step. Because this is online, you’re not going to be there and they have to read everything and understand everything by themselves. You can’t really skip any steps. It’s challenging in that respect. Planning and organization is the hardest part of it.

Several faculty members also commented on the challenges of keeping up with students and responding to messages throughout the semester. One stated, “Especially if you do it right, which means a lot of involvement by the participants in threaded discussions and conversations. Because the online students expect very rapid feedback.”

However, the faculty also cited some time-related advantages offered by online and blended courses. Specifically cited was the flexibility offered by online and blended courses, both to faculty and to students. For example, it was noted that online courses

can be conducted while travelling, and that it allows busy people to plan the course “around your life.” One faculty member specifically noted that this has benefited a range of students, including students with disabilities, student athletes, and students who were studying abroad. One participant described an interesting benefit offered by this flexibility in teaching a blended course, stating that:

By the end of the semester, no matter who you are, the kids get tired of you, so there’s a point that’s really nice because you all have a break from each other. Where you just need to do some learning on your own and I think that’s a really nice aspect of hybrid.

Being able to complete the work at anytime, anyplace, as well as being able to break up learning, and the ability to go back to particular points were also specifically cited by the faculty as advantages for students.

### Interaction with Students

Nine of the faculty interviewed observed that online and blended courses require student involvement, because students “can’t hide” in the digital environment as they can in a face-to-face course. One faculty member elaborated that:

Participation by students in our program can be a problem. They come to class, they want to be told exactly what they need to know, and don’t really ask questions or participate as much as I would like them to. But in an online format, they have to, because otherwise they can’t successfully complete the course.

Another respondent commented that, “They [students] have learning modules that they have to respond to every week and they can’t just go ahead. I know who’s participating.”

Ten of the faculty discussed how online and blended courses allow students increased opportunity for participation. This included allowing students both time and privacy to process and reflect on course information, particularly for those quieter students who

don’t like to actively participate in a face-to-face course. As one faculty member explained, the online postings “gave the students who are quiet an opportunity to voice their opinions and voice their ideas online. In the [face-to-face] class I had to pick on those students a lot. Sometimes, I think they were intimidated.” Another respondent described that an online or blended course “allows for a level of participation from students who are not necessarily socially excited to be in the class.” One faculty member also noted:

I get 100% class participation in my online class, whereas a face-to-face class, you don’t get that. I know which people are the first to post, I know who does their research before they post, I know the people who post last, I know the people who post at two in the morning and do their work in the morning, I know the people who are trying to squeeze things in during their lunch breaks and maybe breakfast, posting at that time.

Eleven of the respondents also commented on the fact that online and blended courses provide opportunities for more frequent feedback to and engagement with students, as well as prompting them to higher levels of application of the course material. One specified, “any time a student wants to chat with me, e-mail me or speak on the phone, I am always there for them.” Another described that students get weekly feedback regarding their progress in the course, and that “keeps them in shape.” It was noted that because students are required to participate, there is the chance to obtain what one faculty member described as “an inside peek into many of the students where in a regular class only a handful of students are participating.” This contributor elaborated that this allows the gathering of “more examples of where students might be struggling with a concept.” Several faculty members talked about being able to jump into discussion postings, to get involved with prompts and follow-up questions, rather than just passively observing. As one faculty member summarized:

I participate. I’ll throw in challenging questions. So you mentioned this theorist, tell me more. How is he

directly related to the product? What would he say about it if he were in the room? Why would he be an advocate for it?

Another noted that the use of an online journal requires students to be “extracting key concepts and bringing them to life somehow and making them personally meaningful so that I know that they really fully understood the concepts.”

The online environment can pose challenges for student interaction, however. Twelve of the faculty discussed the drawbacks caused by not being able to see students, and to gauge their non-verbal reactions and emotions in class to course expectations and directions, and to course content. One participant described this as follows: “The most obvious one [challenge] is lack of personal contact and dealing with problems that are best handled face-to-face. Sometimes students have trouble accessing the material and it’s more difficult to explain it to them via e-mail rather than demonstrating.” Another respondent stated, “You don’t have feedback immediately from students. Usually you can read the non-verbal to see if they’re getting it and you can readjust, so that doesn’t seem to exist as easily in the online environment.”

### **Student Autonomy**

Supporting findings in the literature, some of the participants described issues in student motivation and engagement. One faculty member stated that:

Occasionally a student will drop off the radar and you don’t have anyway to grab them, whereas in a live class you may be on campus and can give them a call but online instructors have to be very cognizant of if you don’t hear anything for a week you have to find them.

It was also noted that online courses are not a good match for students who lack autonomy. One participant explained “they have to self-discipline themselves so I think that’s the biggest challenge. You have to encourage them. I also find myself posting messages like, ‘you guys are doing good. Keep up the good work.’” This thought was described as follows: “online students have to be with the class the whole way through. If you are a procrastinator, don’t take an

online class. It’s not going to work because it demands your attention every week and to drop off the radar for two or three weeks, you’ll never get caught up again.”

### **Quality of Courses**

Several faculty members explained that online and blended instruction requires a thoughtful and organized approach to instruction, which can enhance course quality. This included careful consideration of learning objectives and instructional approaches. One interviewee stated that:

I think you have to be more thoughtful [while teaching in the digital environment] because I think people tend to teach the way they’ve taught or how they’ve seen people teach and it can be kind of repetitive and you have a tendency to be not as reflective but if you’re in an online environment you really need to think about how you structure your course.

The most commonly cited advantage (noted by 16 participants) was being able to assess students differently and to provide increased feedback. The faculty members described that, depending upon the type of assessment, some of this feedback can be provided instantaneously, but also that the feedback can be structured in such a way that the students “get in a rhythm for it.” Technology also provides an avenue for providing this feedback, as one respondent commented:

I have found that even using track changes in Word is really helpful, it is a lot faster and easier to send feedback back to students online than it is for them to wait three or four days until I can see them again to give them a paper back.

The online platform also allows for what one faculty member called “touch points” and attitudinal surveys, where the students can “pull it all together before we move on.” Another described the use of an online polling program and stated:

At the end of a discussion or at the end of the lecture, I present a question. And whether it is a straight knowledge or a critical thinking

question; I mix it up. I present that question at the end of a presentation or lecture and the students answer the question via texting. And we know the results right away of people who understood the main concept and was the class 50/50 of 98% understanding the main concept. Obviously, if it's 50/50, there is a lot more discussion that needs to go on. But if everyone is getting the content, then I move on.

### **Suggestions from the Faculty**

Just as the interviewed faculty stressed the issue of time in course planning and content delivery from their experiences, the most common suggestion provided by the respondents for their colleagues preparing to teach online or blended courses was to allow more time for course planning. Noted by nine of the participants, comments related to time included, "Definitely put in the time for planning, it is really rewarding and a good experience" and "give yourself a lengthy period of time to create the course because it does take longer than you think." Another faculty member advised:

Be ready to spend as much if not more time than you do in preparing for your classroom situations. I thought this was going to be less time consuming; it was actually more, definitely more for the online course because with the classroom you prepare, you walk in, you deliver it once to however many, so you're there for an hour, two hours, whatever your course is. When you're online, we were asking for a lot of threads, and posting the content, and explaining it, so you had to explain it to each individual who asked you the question. You could make some announcements, but yet you may be answering some questions individually, and it does take a lot to prepare and post especially if you are having to interact with the conversation threads. It took a lot of time, and also monitoring it, you don't want it to go

too far and drift. I found it to be more time consuming so be ready for that. Be ready to support your students not only for teaching them the content but also making sure that they know how to navigate the technological part of it. Some students will be really savvy with it and some will not be.

In regard to the amount of planning required, one faculty member suggested:

Get prepared because we can't really leave it to the last minute and be like 'OK, I'm teaching online this semester. Let's start'. It can't be like that. I started preparing my stuff way earlier. I started preparing three months before. I'm telling you I'm still not done. I'm still preparing stuff, so it's a long process. Start early.

On a related theme, six of the participants advised their peers to start slowly, and to "recognize that the first time through is not going to be that smooth, there are going to be bugs in it and it's not going to be perfect. Give yourself a couple of years to work it out."

Eight of the participants advised their peers who are thinking about going into online or blended instruction to seek out assistance and guidance from peers and other supports on campus. One faculty member suggested "enjoy this process, get good help, find resources, and develop relationships with the people who know more about this because those are the people who can solve problems of a technological nature or even content wide." Attendance at professional development sessions on campus, independent research, and even being placed into a peer's existing class were specifically recommended. As one faculty member summarized: "don't plow into it independently, but learn from those who have gone before and have already been there and learned from those mistakes. You not only don't have to re-invent the wheel, you don't need to reinvent the flat tire."

## Discussion

Prior studies have identified technology as a barrier to faculty considering online and blended instruction. These studies have pointed to faculty comfort level and ability to work with technology in online and blended courses, as well as frustration when technology fails to work as planned (Gahungu et al., 2006; Oblinger & Hawkins, 2006; Thomas & Parker, n.d). The faculty interviewed for this study certainly acknowledged these concerns, but seem to be comfortable in working around them, regardless of institution type (a community college, a liberal arts college, state universities, and a Research I institution). Several faculty pointed out the need to start with only a few pieces of technology, and then to add more features as one's comfort and skill level increases. Likewise, the faculty were clear in the need to seek out support and to get help, wherever possible, to work out many of the technology issues that might arise. However, perhaps most importantly for college teaching, the faculty encouraged their peers to think about their pedagogy first and foremost, and then the technology that helps them to meet their pedagogical needs.

Perhaps the most commonly cited challenge to online and blended teaching by the sample members was the amount of time required. This was noted in the challenges regarding planning a course and keeping up with students' interactions throughout a course, as well as in the recommendations for peers considering online and blended instruction. This clearly reflects findings in the existing literature regarding greater workload required to teach an online or blended course and was a concern of faculty across disciplines and across types of institutions.

Although in the literature researchers have noted that some faculty have concerns with the lack of personal interaction with students, many of the faculty interviewed from all types of institutions appear to view online and blended courses as a way to promote and foster student involvement and communication. The lack of non-verbal feedback and the inability to monitor student reactions for understanding was certainly noted, but several of the faculty described that by focusing carefully on developing a course community, by setting clear expectations and providing clear directions, and by building in frequent assessment points and providing on-going feedback, this concern can be overcome.

Likewise, and often because of the lack of face-to-face contact, the faculty who taught online across institutional types confirmed some of the issues noted in the literature related to student self-motivation and autonomy. Some faculty described methods to prompt students and to keep them engaged to help overcome this, such as calendar postings or frequent emails with course updates. One faculty member noted that "I send out regular e-mails with regular announcements summarizing what we're all doing...I do things like that but I'm [in] touch with them every other day as a group." Providing frequent and fairly rapid feedback was described as method to engage students, as was offering positive comments after a strong posting. One faculty member explained that by using an audio program to create narrated messages, students reported that the course seemed more personalized. Certainly, many of these approaches tie into faculty observations about needing to allocate more time for online instruction, but the faculty also noted limits to how far they were willing to go. As one respondent stated:

Maybe the first couple of times I see people slipping I might mention it and after that I'm like you know what? I'm not your mother. You know your expectation. It's in my syllabus. If you choose not to do that, you choose not to do that...I need to have some standards in terms of getting them prepared for real life.

## Limitations and Areas of Future Research

This study is limited given the small sample size from each of the 5 institutions. An expanded investigation with a larger sample size across the types of postsecondary institutions will add weight to the findings. Also, future studies that examine outcomes related to retention and learning for students with disabilities, will add to our understanding of the impact of the digital learning environment at the postsecondary level. Students with disabilities make up approximately 11% of all undergraduates in the United States (National Center on Education Statistics, 2009) and students with learning disabilities made up roughly 3% of all incoming freshmen in 2008 (Pryor et al., 2008). As noted by several researchers (Bohman, 2004; Bohman & Anderson, 2005; Crow, 2008), the online access needs of students with such hidden disabilities is largely not addressed in the professional literature.



## Summary

Colleges and universities are increasing the number of online and blended course offerings. Clearly, the digital environment offers advantages (e.g., flexibility, communication and engagement with students, varying assessments) and challenges (e.g., time demands, lack of in-person communication, required student autonomy) to faculty teaching in this medium. These advantages and challenges are paradoxical. For example, online courses give faculty the advantages of flexibility, but the challenge of the time required to teach online courses. Another example is the opportunity for communicating with and engaging students in online courses, but also lack of in-person communication. Faculty considering or planning to teach in an online or blended format should allow time to plan and organize their course, including activities that will develop a community of learners, set clear expectations, build in frequent assessment points, and provide on-going feedback. Additionally, faculty should focus on the pedagogical needs of the course content first, and then the technology that will implement those requirements.

## References

- Allen, I. E., & Seaman, J. (2010, November). *Class differences: Online education in the United States, 2010*. Babson Survey Research Group and the Sloan Consortium.
- Allen, I. E., & Seaman, J. (2010, January). *Learning on Demand: Online Education in the United States, 2009*. Babson Survey Research Group and the Sloan Consortium.
- Allen, I. E., & Seaman, J. (2006). *Making the grade: Online education in the United States, 2006*. Needham, MA: Sloan Consortium.
- Baglione, S., & Nastanski, M. (2007). The superiority of online discussion: Faculty perceptions. *Quarterly Review of Distance Education*, 8, (2), 139-150.
- Bohman, P. (2004). *Cognitive disabilities part 1: We still know too little and we do even less*. Retrieved July 15, 2010 from [http://www.webaim.org/articles/cognitive/cognitive\\_too\\_little/](http://www.webaim.org/articles/cognitive/cognitive_too_little/)
- Bohman, P. R., & Anderson, S. (2005). *A conceptual framework for accessibility tools to benefit users with cognitive disabilities*. Retrieved July 15, 2010 from <http://www.webaim.org/articles/framework>
- Conceicao, S. C. O. (2006). Faculty lived experiences in the online environment. *Adult Education Quarterly*, 57(1), 26-45.
- Crow, K.L., (2008, February). Four types of disabilities: Their impact on online learning. *Tech-Trends*, 52(1), 51-55.
- El Mansour, B., & Mupinga, D. M. (2007) Students' positive and negative experiences in hybrid and online classes. *College Student Journal*, 41(1), 242-248.
- Gahungu, A., Dereshiwsky, M. I., & Moan, E. (2006). Finally I can be with my students 24/7, individually and in groups: A survey of faculty teaching online. *Journal of Interactive Online Learning*, 5(2), 118-142.
- Georgina, D. A., & Olson, M. R. (2007). Integration of technology in high education: A review of faculty self-perceptions. *Internet and Higher Education*, 11(1), 1-8.
- Grant, M. R., & Thornton, H. R. (2007, December). Best practices in undergraduate adult centered online learning: Mechanisms for course design and delivery. *MERLOT Journal of Online Learning and Teaching*, 3. Retrieved on August 10, 2011 from <http://jolt.merlot.org/documents/grant.pdf>
- Grant, D., Malloy, A., & Murphy, M. (2009). *A comparison of student perceptions of their computer skills to their actual abilities*. Journal of Information Technology Education (8). Retrieved on August 10, 2011 from <http://jite.org/documents/Vol8/JITEv8p141-160Grant428.pdf>
- Harker, M., & Koutsantoni, D. (2005) Can it be effective? Distance versus blended learning in a web-based EAP program. *ReCall*, 17(2), 197-216.
- Hathorn, L., & Hathorn, J., (2010). Evaluation of online course websites: Is teaching online a tug-of-war? *Journal of Educational Computing Research*, 42(2) 197-217, 2010.

- Hensley, G. (2005). Creating a hybrid college course: Instructional design notes and recommendations for beginners. *Journal of Online Learning and Teaching*, 1(2). Retrieved March 23, 2013 from [http://jolt.merlot.org/vol1\\_no2\\_hensley.htm](http://jolt.merlot.org/vol1_no2_hensley.htm)
- Irani, T. & Telg, R. (2002, August). Gauging distance education students' comfort level with technology and perceptions of self-assessment and technology training initiatives. Paper presented at the Agricultural Communicators in Education (ACE) Conference, Savannah, Georgia.
- Koenig, R. (2010). Faculty satisfaction with distance education: a comparative analysis on effectiveness of undergraduate course delivery modes. *Journal of College Teaching and Learning*, 7, (2), 17.
- Li, Q., & Akins, M. (2004). Sixteen myths about online teaching and learning in higher education: Don't believe everything you hear. *Tech-Trends*, 49(4), 51-60.
- Lindsay, E. B. (2004). The best of both worlds: Teaching a hybrid course. *Academic Exchange Quarterly*, 8(4). Retrieved March 23, 2013 from <http://rapidintellect.com/AEQweb/cho2738z4.htm>
- Lorenzi, F., MacKeogh, K., & Fox, S. (2004). Preparing students for learning in an online world: An evaluation of the student passport to E-learning (SPEL) model. *European Journal of Open Distance and E-learning*. Retrieved March 23, 2013 from [http://www.eurodl.org/materials/contrib/2004/Lorenzi\\_MacKeogh\\_Fox.htm](http://www.eurodl.org/materials/contrib/2004/Lorenzi_MacKeogh_Fox.htm)
- Maryland Online (2009). *Quality Matters Rubric Standards 2008-2010 Edition*. Retrieved March 23, 2013 from <http://www.qmprogram.org/files/RubricStandards2008-2010.pdf>
- McGee, P., & Diaz, V. (2007). Wikis and Podcasts and blogs! Oh, my! What is a faculty member supposed to do? *EDUCAUSE Review*, 42(5), 28-41. Retrieved March 23, 2013 from <http://www.educause.edu/ero/article/wikis-and-podcasts-and-blogs-oh-my-what-faculty-member-supposed-do>
- Mills, S., Yanes, M., & Casebeer, C. (2009). Perceptions of distance learning among faculty of a college of education. *Journal of Online Learning and Teaching*, 5(1).
- Murphy, K. & Cifuentes, L. (2001). Using web tools, collaborating, and learning online. *Distance Education*, 22, (2), 285-305.
- National Center for Education Statistics. (2009). Number and percentage distribution of students enrolled in postsecondary institutions, by level, disability status, and selected student and characteristics: 2003-04 and 2007-08. *Digest of Education Statistics*. Retrieved March 23, 2013 from [http://nces.ed.gov/programs/digest/d09/tables/dt09\\_231.asp](http://nces.ed.gov/programs/digest/d09/tables/dt09_231.asp)
- Oblinger, D. G., & Hawkins, B. L. (2006). The myth about online course development. *Educational Quality Correlates of Online Graduate Management Education*, 41. Retrieved March 23, 2013 from <http://net.educause.edu/ir/library/pdf/erm0617.pdf>
- Passmore, D. L. (2000). Impediments to adoption of web-based course delivery among university faculty. *Asynchronous Learning Networks Magazine*, 4(2).
- Pryor, J. H., Hurtado, S., DeAngelo, L., Sharkness, J., Romero, L. C., Korn, W. S., & Tran, S. (2008). *The American Freshman: National Norms for Fall 2008*. Los Angeles: Higher Education Research Institute, University of California, Los Angeles.
- Shelton, K., & Saltsman, G. (2006). Faculty issues in online education. *University Business*, 9, 73-76. Professional Media Group, LLC. Retrieved on August 3, 2011 from <http://www.universitybusiness.com/viewarticle.aspx?articleid=275>
- Thomas, S. & Parker, J. (n.d.) An evaluation of faculty's use of instructional technology and the center for educational technologies. University of Illinois at Urbana-Champaign. Retrieved on March 23, 2013 from [http://www.cites.illinois.edu/reference/learningtech/research/faculty\\_use\\_of\\_technology.pdf](http://www.cites.illinois.edu/reference/learningtech/research/faculty_use_of_technology.pdf)
- Zhao, Y., & Cziko, G. A. (2001). Teacher Adoption of Technology: A Perceptual Control Theory Perspective. *Journal of Technology and Teacher Education*, 9(1), 5-30.