Hybrid Courses

Prepared by:
Dustin Fife, MLS
Mary Naylor, MLS
David Alden-Rivers

Utah Valley University Library
Questions for Research on Hybrid Courses:

1. How do you define hybrid courses?
   a. How are they the same/different from blended learning or flipped classrooms?

2. What are the immediate and long-term benefits of hybrid courses?
   a. For students?
   b. For faculty?
   c. For institutions?
   d. What are intrinsic and extrinsic motivations for offering hybrid courses?

3. What are the main roadblocks to implementing effective hybrid courses? How can they be overcome?

4. How do you promote the concept of hybrid courses?
   a. To students?
   b. To faculty?
   c. Is there a profile of the type of student who is likely to enroll?

5. How do you develop a hybrid course?
   a. How do they differ from online courses?
   b. Criteria for effective courses
   c. How do you determine what should be face to face and what should be online?
   d. Different models – which most effective?
   e. What are the technology hardware and software requirements for students and teachers?

6. How do you train instructors?

7. Are certain subjects more suited for a hybrid form?

8. How do you measure effectiveness vs. online or face to face courses?

9. What are effective technology tools to use in a hybrid course?

10. What other universities are successfully using hybrid programs?

11. What is known about the success of using hybrid courses to free up classroom space?
Executive Summary:

Hybrid courses are becoming prominent at universities across the United States. This innovative approach looks different from university to university, but for the purpose of this literature review we use a basic definition that includes blended learning, hybrid learning, and mixed-mode learning.

“The terms blended learning, hybrid learning, and mixed-mode learning are used interchangeably in current research; however, in the US, hybrid learning, is used most often, (Martin, 2003). Although hybrid learning can be diverse in how it is implemented, educators agree that this approach is ‘any time a student learns at least in part at a supervised brick-and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path and/or pace’” (Staker, 2011, p. 5)” (O'Byrne and Pytash, 2015, p. 137-138).

Both blended and traditional courses can use flipped pedagogy, so it will not be the focused on in this literature review. We will, however, be exploring the benefits, obstacles, best practices, and long-term sustainability of hybrid courses.

Hybrid courses present an innovative and flexible model that can be adapted for many different courses. “Much of the power in hybrid learning comes from the modification and manipulation of time, space, and place to improve teaching and learning. Asynchronous and synchronous learning events have different properties that may be exploited for different pedagogical purposes (Sotillo, 2000)” (O'Byrne and Pytash, 2015, p. 138). Multiple pedagogical methods break down traditional barriers and increase opportunities for students, especially those that need flexibility to learn.

The University of Washington, Bothell articulates well the benefits of hybrid learning for faculty, students, and the university.

“Benefits to Students:

● More opportunities to interact with course materials and resources, leading to greater engagement and enhanced opportunities for
success

- Higher-quality peer interaction
- Greater flexibility in course scheduling, a boon to UW Bothell’s high percentage of working and commuting students.
- Increased skills in, self-directed learning, leading to greater learner autonomy.
- Skills in communicating effectively in multiple modes.
- Increased technical skills.”


“Benefits for Faculty:

- Enhanced pedagogical practices as a result of redesigning the learning experience.
- Better student engagement.
- More flexible schedule and better ability to work from different locations.
- More opportunities to participate in interdisciplinary practices (ie. course linking).
- Better online pedagogical and technology skills while still retaining the valued face-to-face interaction with students.”


“Benefits to the University:

- Enhanced university brand and reputation with the potential of being a leader in hybrid learning.
- More efficient use of classroom space which could increase classroom availability.
- Greater student access and enhanced student learning.
- Active implementation of the 21st Century Campus Initiative's innovation and sustainability goals.”

Because so many institutions have been working on hybrid courses it is easy to identify possible roadblocks. Kaleta, Garnham, & Aycock (2015), identify the two most important barriers for faculty. “The two major obstacles in getting faculty to consider teaching Hybrid courses are change and time. Instructors are asked to change the way they teach and commit a significant amount of time and effort to the process” (p. 2). In order to overcome these important obstacles faculty need institutional support and resources. “A well designed, formal Hybrid Course Faculty Development Programme is the most effective and time-efficient solution for introducing faculty to hybrid teaching. The program should emphasize practical, pragmatic advice about how to design and teach hybrid courses” (p. 2). Other barriers have been identified and should be taken into consideration, however, most can be combated through institutional support and emphasizing the strength of combining classroom and online activities. These barriers include:

- “The challenge of designing an online or hybrid course is significant and, in this case, preparation time was approximately three times greater than what would be spent planning for a face-to-face course, even though the instructor had taught online and hybrid courses in the past. Much of that time was devoted to developing interactive elements and assignments that would function well and meet the course goals in an online learning environment. As a result, instructor time spent on course preparation was greatly reduced when teaching the course a second time” (Palmer, Shaker, & Hoffmann-Longtin, 2014, p. 102).

- “Student respondents (12.5%) wrote that online activities caused problems when they needed clarification or instructional support and instructors were non-responsive within ‘reasonable’ time parameters.” (Foulger, Amrein-Beardsley, & Toth, 2011, p. 158)

- “…A 2013 survey of 2,251 professors, from Inside Higher Ed found significant skepticism among faculty members about the quality of online learning (Lederman & Jaschik, 2013) in comparison to the traditional classroom. Only one in five of the faculty surveyed agreed that online courses could achieve learning outcomes equivalent to those of in person courses, and the majority considered online learning to be of lower quality than in-person courses on several key measures.” (Palmer, Shaker, & Hoffmann-Longtin, 2014, p. 100)
Hybrid courses should be developed systematically, and several institutions have published best practices. James Madison University published their best practices and they are thorough and easily adapted to other universities.

- “The curriculum and instruction of online and hybrid courses will be fully comparable in rigor to the same curriculum delivered on campus. The following apply: 1. Students should receive an orientation that provides information regarding how the course or program works, expectations, assignments, and any required technologies. 2. Learning objectives and course goals should be clearly stated. 3. Course requirements are clearly stated, consistent with course objectives, and representative of the scope of the course. 4. The course content and assignments will be of sufficient rigor, depth and breadth to teach to the objectives of the course. 5. The method for determining grades is clearly specified on the syllabus. 6. Graded work is based on appropriately sequenced and instructionally diverse activities that promote the achievement of learning objectives. 7. The course instructor provides students with frequent feedback about their performance, and opportunities for instructor-student interactions.” (p. 4)

- “Instructors should regularly evaluate learning technologies used to determine if they are pedagogically effective, and whether more effective teaching methods could be employed.” (p. 5)

- “Decisions regarding faculty workload and compensation for online and hybrid classes should take into consideration differences in time and effort involved in delivering a high quality online or hybrid course that fosters substantial interaction among students and between faculty, versus that involved in delivering the same or a similar class in a traditional classroom format.” (p. 6)

- “Faculty interested in developing online and hybrid courses should conduct a self-assessment regarding the following areas: 1. Competence in using the tools required to teach online. 2. An understanding of the amount of work involved in preparing and teaching an online course. 3. An understanding of the need for regular communication with student. 4. The identification of areas where there is a need for additional theoretical or practical training in online instruction.” (p. 6)
“Students should evaluate their technological competencies and their access to required technologies prior to enrollment to confirm that they are ready to take a course offered in an online format.” (p. 7)

“Effective ways to prevent cheating and plagiarism in the online classroom include the following: 1. “Chunk” assignments over the course of a few weeks. 2. Use timed tests to mitigate the potential of Internet surfing. 3. Be proactive by corresponding directly with students who may be at high risk for cheating. 4. Design tests as open book tests. 5. Use technology to offset potential cheating (e.g., browser lockdown applications, etc.).” (p. 8)

“Faculty are expected to comply with Title 17, United States Code regarding copyright laws and the supplement Technology, Education, and Copyright Harmonization Act (TEACH Act) as it pertains to distance classes.” (p. 9)


This is only one of several available best practices documents. Utah Valley University does not need to reinvent the wheel. It can rely upon the practices it has already implemented and fine tune them by learning from other institutions. The benefits and obstacles of hybrid courses are well-documented and have been tested at institutions across the United States. The work of Faculty at UVU can benefit from the experiences of local and national colleagues and the best practices of well-developed programs.

The conclusions column of this literature review contains incredible insights into hybrid courses and should be examined thoroughly. There is no one answer to any of the posed questions, the questions are grouped and separated into different tables that can be considered separately or holistically. When the literature is considered all together, hybrid learning is shown to be an innovative asset to students, faculty, and universities.
**Keywords:**

Searches ((hybrid OR blended) AND (course OR class OR learning OR instruction)) AND (develop*)
(hybrid AND (class or course or instruction)) AND (college or university or higher education)
(hybrid AND (course OR class OR instruction)) AND (retention OR academic achievement OR student success OR quality) AND (college OR university OR "higher education")

**Peer-reviewed Articles:**

**How do you define hybrid courses? How are they the same/different from blended learning or flipped classrooms?**

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<th>Citation</th>
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| 1. Helms, S. A. (2014). Blended/hybrid courses: A review of the literature and recommendations for instructional designers and educators. *Interactive Learning Environments*, 22(6), 804-810. | This article explores some of the literature on blended/hybrid learning and identifies recommendations for instructional designers and faculty. Terminology and definitions are discussed first including the debate between the words “blended” and “hybrid.” A working definition for the article is discussed but the article does not propose a standard definition for the field. The learning advantages of using a | ILL | Study was limited to MBA Students at a single institution only. | -- “Statistical analysis of the blended model occurred in three distinct phases:
1. A regression analysis was performed to understand whether course grades were influenced by gender, course, semester, number of credit hours, cumulative GPA, and whether it was a blended course.
2. Variables deemed statistically significant in the regression analysis were isolated; a t-test was |
blended/hybrid format are identified from the literature including improved grades, retention and communication and teamwork. The recommendations are discussed in four broad categories: (a) face to face and online scheduling, (b) communication, (c) course content, and (d) other recommendations. The article concludes with a call for future research into blended/hybrid learning and how to best construct blended/hybrid courses from an instructional design standpoint.

conducted to compare each of the significant variables in the traditional versus blended model courses.

3. A hypothesis test was conducted to determine whether the proportion of students passing the quantitative classes was the same for both the traditional and blended courses.” (p. 233)

“Our preliminary analysis revealed significant differences between the students passing the quantitative courses taught traditionally (72.7%) versus online (63.2%). In stark contrast, the proposed blended model indicates that the achievement gap between the various course delivery modes has nearly been eliminated.” (p. 235)

“An analysis of university data revealed a performance gap among
students taking online versus traditional (face-to-face) classes. Research has revealed that blended courses provide a reasonable alternative to classes offered exclusively online and yield student pass rates comparable to traditional courses.” (p. 236)

| 2. O'Byrne, W. I., & Pytash, K. E. (2015). Hybrid and blended learning. *Journal Of Adolescent & Adult Literacy, 59*(2), 137-140. | Hybrid or blended learning is defined as a pedagogical approach that includes a combination of face-to-face instruction with computer-mediated instruction. The terms blended learning, hybrid learning, and mixed-mode learning are used interchangeably in current research; however, in the United States, hybrid learning is used most often. Although hybrid learning can be diverse in how it is implemented, educators agree that this approach has the opportunity to provide personalized instruction with some element of student control over time, place, path and/or pace” (Staker, | Article refers to the experiences of one member of faculty at a single institution. No statistical evidence given to prove the success/failure of the member of faculty’s hybrid learning program. -- “The terms *blended learning*, *hybrid learning*, and *mixed-mode learning* are used interchangeably in current research; however, in the US, *hybrid learning*, is used most often, (martin, 2003). Although hybrid learning can be diverse in how it is implemented, educators agree that this approach is “any time a student learns at least in part at a supervised brick-and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path and/or pace” (Staker, |
student control over path, pace, time, and place. Educators and students need to be given the latitude to teach and learn in these hybrid spaces while being protected and supported by schools. Ultimately, teachers and students bear an equal responsibility as they collaboratively learn and experiment in these evolving spaces.

-- “Researchers tout that hybrid learning has the potential to provide a transformative experience in which new modes of education can challenge teachers to consider the best ways to educate students.” (p. 138)

-- “Much of the power in hybrid learning comes from the modification and manipulation of time, space, and place to improve teaching and learning. Asynchronous and synchronous learning events have different properties that may be exploited for different pedagogical purposes (Sotillo, 2000).” (p. 138)

-- “Hutchison and Woodward (2014), argued that when incorporating any digital technology into the classroom, the instructional goals should be the first consideration and also provide the 2011, p.5).” (p. 137 & 138)
impetus for reflection, after the tool has been implemented. This can be true of hybrid learning models. Educators must consider their objectives, learning outcomes, and why this instructional model is most effective for student learning and engagement.” (p. 138)

-- “One of the more comprehensive models, (of Hybrid Learning), details six versions of hybrid learning: F2F driver, rotation, flex, online lab, self-blend and online driver.” (p. 138)

-- “Watson (2007) indicated the following additional skills needed by educators as they build, teach, and learn in hybrid spaces:
1. Educators and students need to build enhanced communication skills.
2. Time management may be a challenge in asynchronous classes.

This discussion of blended learning environments covers: (1) background; (2) why the term "blended" is used, and what can be blended; (3) goals of blended learning environments, including pedagogical richness, access to knowledge, social interaction, personal agency, cost effectiveness, and ease of revision; and (4) characteristics of five case studies. (MES)

http://eds.a.ebscohost.com/eds/detail/detail?v=1&sid=80608d8d-8593-47c4-9884-f48e6f79455b%40sessionmgr4005&hid=4202&bdata=JnNpdGU9ZWRzLWxpdmU%3d#AN=EJ678078&db=eric

Article is quite old (13 years), and references even older previous studies.

Students can be online at anytime, so teachers cannot predict when heavier workloads will occur.
3. Teacher planning time needs to be extended and enriched.
4. Educators must be prepared to differentiate for different learning styles or abilities.” (p. 139)

-- “Figure 1 shows the various mixes that can occur in blended learning environments. The main point of the figure is that no two courses will be exactly the same. Some may emphasize asynchronous student-to-student contact (Blend 2) while others will require significant amounts of synchronous interaction (Blend 1). The aim in either ease is to find that harmonious balance—the balance of instructional strategics that is tailored specifically to improve student learning.” (p. 228)
- The authors have identified six goals that educators might espouse as they design blended environments:
  1. pedagogical richness,
  2. access to knowledge,
  3. social interaction,
  4. personal agency,
  5. cost effectiveness, and
  6. ease of revision.”
  (p. 231)

- “Some emphasize the benefit of cost reduction that blended environments offer. Such proponents argue that by reducing time in class, additional tuition-paying students can enter an institution to fill the seats left vacant by those who are spending part of their time learning online.”
  (p. 232)

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<td>This paper examines an alternate approach to the &quot;flipped&quot; classroom paradigm for an upper level history class using a blended on-line and in class format. The concept discussed is how &quot;flipped learning&quot; can be constructed within a hybrid learning format. The focus of this study is the flipped classroom instructional paradigm for an upper level history course only and mainly focuses on the use of particular historic resources and their use with a hybrid learning environment. The concept is available at <a href="http://ezproxy.uvu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&amp;db=eft&amp;AN=99990274&amp;site=eds-live">http://ezproxy.uvu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&amp;db=eft&amp;AN=99990274&amp;site=eds-live</a></td>
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<td>According to its adherents, the flipped instructional paradigm allows “students [to] gain first exposure to new material outside of class, usually via reading or online lecture notes.”</td>
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of the flipped classroom has received increasing emphasis based on its potential to create a student-centered learning environment that incorporates practical instruction along with collaborative techniques. The use of flipping has largely been tied to the incorporation of video technology either in the form of a student practicum or an instructor lecture via on-line delivery combined with a classroom meeting involving collaboration and/or application exercises in the face-to-face session. With respect to flipping the history classroom, this paper offers the results from an upper division history course in which historical primary sources were introduced in the on-line portion of a hybrid class. The use of the primary sources also included a bi-modal collaborative framework.

lecture videos, and then use class time to do the harder work of assimilating that knowledge, perhaps through problem-solving, discussion, or debates. In terms of Bloom’s revised taxonomy (2001), this means that students are doing the lower levels of cognitive work (gaining knowledge and comprehension) outside of class, and focusing on the higher forms of cognitive work (application, analysis, synthesis, and/or evaluation) in class, where they have the support of their peers and instructor” (Brame, 2014).” (p. 44).

-- “In essence, the “flipped” paradigm introduces information to the student prior to his/her attendance in the classroom, but perhaps more importantly initiates collaboration between the students themselves and the instructor prior to the
mechanism, since students collaborated by sharing their thoughts prior to class and the start of the class incorporated a student-centered collaborative exercise based on the primary sources. This collaborative discussion on the primary sources served as the gateway into the broader topic discussion. This paper describes this process and uses student feedback to evaluate the effectiveness of this methodological approach.

presentation of the material with a corresponding expectation that the information presented will focus on higher level cognitive processes such as analysis, evaluation, and comparison.” (p. 44)

-- “The primary source was posted to the course content page of the Blackboard course management system one week prior to the in-class meeting along with specific questions provided by the instructor related to the historical document or artifact. The students had a six day window prior to the in-class meeting to post their responses. In addition to authoring their own posts, students were expected to read and comment on the posts of their classmates thus initiating peer-to-peer collaboration.” (p. 48)

-- “this ‘half-flipped’
One of the major concerns voiced by educators in using the flipped paradigm, the loss of “engaging face-to-face Socratic teaching” (Hamdan et al, 2013). One of the benefits of this alternate approach to flipped learning with respect to the history classroom is that it not only relies on a great deal of collaboration, but it still allows for the use of significant in-class time for lecture and Socratic discussion, a critical element in the classic humanities canon of instruction.” (p. 56)

What are the immediate and long-term benefits of hybrid courses?

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<td>1. Auster, C. (2016). Blended learning as a potentially winning combination of face-to-face and online learning.</td>
<td>Blended learning, in the form of screencasts to be viewed online outside of class, was incorporated into three sections of an</td>
<td><a href="http://tso.sagepub.com/content/44/1/39.full.pdf+html">http://tso.sagepub.com/content/44/1/39.full.pdf+html</a></td>
<td>One of the major limitations of this assessment is that students’ survey responses could not be</td>
<td>-- “The replacement model (of Blended Learning), is characterized by some reduction in face-to-face, in-class meeting</td>
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introductory sociology course in a liberal arts college setting. The screencasts were used to introduce concepts and theories to provide more time for discussion in class and more opportunity for students to review concepts and theories outside of class. Students’ use and their perceptions of the impact of the screencasts were assessed with an in-class survey instrument in addition to a web-based college-administered survey. Although it was not possible to measure the impact of blended learning on students’ academic performance and learning outcomes in this exploratory study, student responses indicated high use of the screencasts as well as the perception that the screencasts were helpful, contributed positively to performance on exams, and also led to more linked with their actual learning or performance in the course.

time and the replacement of that time with online, out-of-class, interactive learning activities as well as the online delivery of some course content. In contrast, the supplemental model retains the same amount of in-class meeting time, but technology is incorporated into what goes on outside the classroom. For the supplemental model, the basic structure of a traditional course is retained; however, outside of class time, students may be asked to watch instructional videos online or engage in other online activities” (p. 40)

Lack (2013) and Wu (2015) each concluded that there were mixed results and overall little systematic difference in performance outcomes between students enrolled in fully online courses and hybrid courses that incorporated
positive feelings about the course more generally. Overall, this provides an optimistic initial appraisal of the prospects for blended learning.

blended learning and those enrolled in face-to-face courses.” (p. 40)

-- “Regardless of when the screencasts were made to be viewed, more than 75 percent of students thought the screencasts were helpful, though they were slightly more likely to feel that screencasts made for viewing before we covered the material in class were helpful (85 percent) than those made for viewing after we covered the material in class (78 percent).” (p. 43)

-- “In addition, on the in-class assessment, students were asked, “Which of the following best describes the impact you believe the screencasts in general had on your performance on exams?” A five-point scale from “very positive” to “very negative” was provided. When “very positive” (49 percent) and “positive” (44 percent)
were combined, the results showed that nearly 95 percent of the students believed the screencasts had a positive impact on their exam performance."

(p. 44)

-- “On the beginning of the semester institutional survey, students were asked about their level of enthusiasm for courses that incorporate such required, self-paced online instruction in addition to classroom instruction. While only 8 percent reported they were “very enthusiastic”, more than half of the students (56 percent) reported they were “moderately enthusiastic”, another 30 percent reported they were “mildly enthusiastic”, and only 6 percent reported that they were “not at all enthusiastic”. On the end of the semester institutional survey students were asked,
“Now that you have had some experience, what is your level of enthusiasm in this course regarding the incorporation of required, self-paced online instruction in addition to classroom instruction?” The results indicated a large increase in students’ level of enthusiasm. Nearly 90 percent of students indicated they were “very enthusiastic” (36 percent) or “moderately enthusiastic” (51 percent).” (p. 45)

-- “Students’ highest ratings of helpfulness were for the screencasts on social structure and culture, two screencasts filled with many new concepts and examples. However, the students were required to write a short paper about a group to which they belonged and use a wide variety of these concepts. Perhaps those two screencasts received the highest
ratings because they provided an additional opportunity to review the knowledge needed in preparation for writing the paper. This suggests that screencasts will be perceived as most helpful when there is a specific assignment for which the content of the screencast is seen as useful." (p. 46)

If an instructor assumes students have learned whatever might have been in the screencast, leaves that content behind, and goes on to other course content, students may perceive the screencasts as extraneous.” (p. 46)

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The authors describe the University of Central Florida's distributed learning evaluation design with respect to student demographics, perceptions, success strategies, learning styles, and success/withdrawal. Article is quite dated. Results are limited to a single institution only.

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“Students' reaction to web-based learning is consistently very positive. They assume a more active posture in the online learning environment, and report increased interaction with both their peers and the
rates. Faculty research focuses on demographics, perceptions, and teaching strategies. Success and withdrawal rates for courses with varying web presence degrees connote that classes featuring reduced seat time face-to-face presence, combined with web-based instruction, produce superior results than fully online or completely face-to-face course outcomes.

instructor. They find web-based learning much more convenient and congruent with their busy lifestyles, and once engaged in a web enhanced course, a student will most probably take another. “ (p. 41)

-- “The mixed-mode approach also results in space saving—an economic advantage. By replacing some face-to-face instruction with web components, M courses allow the weekly operation of multiple classes in a classroom previously occupied by only one course. “ (p. 42)

-- “Current demographic studies also show that students of all ethnic backgrounds participate in, succeed in, and withdraw from online courses at rates proportional to their comparable counterparts in face-to-face classes. Women consistently
register in fully online courses in greater proportions than students in the university's general population, and women succeed at higher rates (Females=85 percent, Males=77 percent) and withdraw at lower rates (Females=6 percent, Males=8 percent) than men.” (p. 44)

-- “Surveys conducted in some general education courses indicate a much more balanced distribution of the Long Behavior Types exists in UCF's general student population. Students representing Aggressive/Dependent (AD) learners account for approximately 37 percent of the population and Aggressive/Independents (AI) for approximately 27 percent. Passive/Independents (PI) appear 18 percent of the time and Passive/Dependents (PD) account for the remaining
19 percent. These comparative data depict passive students participating in online courses at an approximate rate of 24 percent, although these students represent 37 percent of the general student population. Aggressive students participate in online courses (78 percent) at rates higher than the general student population, though they comprise 63 percent of the general student population. (p. 45) — Aggressive/Dependents (AD) report much less rigidity in online classes when compared to their face-to-face course behavior. (p. 45) — Aggressive/Independents (AI) report an improved sense of time management and cite increased motivation and levels in their web-based courses.
classes.” (p. 45)

-- “Passive/Independents (PI) also cite a newfound sense of motivation in their online experience, and report an increased sense of responsibility for their achievements.” (p. 45)

-- “Most importantly, the PI group reports less resistance to academic demands.” (p. 45)

-- “Two reasons predominate: students lack technology readiness, and they underestimate online course demands. Follow-up student interviews reveal their failure to understand that although online courses offer convenience as to time and place, they are as demanding as their comparable face-to-face sections.” (p. 46)

-- “Instructors indicate, however, that the quality and quantity of
interaction in these
courses is greater than in
their on-campus sections.
Virtually all faculty who
undertake and persevere
in web courses report high
satisfaction levels and a
strong willingness to
continue teaching in the
online mode.
Interestingly, their
satisfaction is
independent of the
increased workloads
associated with this mode
of teaching.” (p. 46)

“Other instructors,
however, assert that they
see themselves as more
learner-centered in their
instruction, designing
their courses with a
variety of active learning
techniques. They feel
better organized, but less
structured in their
teaching. They further
indicate that they deliver
more material online with
greater effectiveness,
improved timing, and with
less reliance on tests for
grading.” (p. 47)

<table>
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<th>This article explores the benefits and challenges of blended learning in higher education from the perspective of students, faculty, and administration that have had direct experience with this form of course delivery. Students indicate that a blended learning model provides them with greater time flexibility and improved learning outcomes but that initially they encounter issues around time management, taking greater responsibility for their own learning, and using sophisticated technologies. Faculty suggest that blended courses create enhanced opportunities for teacher-student interaction, increased student engagement in learning, added flexibility in the teaching and learning process.</th>
<th>Good literature review of older studies (pre-2005), but no new research.</th>
<th>“There are those who suggest that engaging students in these types of online learning activities also changes the nature of the in-class sessions (Meyer, 2003). As a result, the focus of the classroom shifts from a presentational format (i.e., lecturing and information dissemination), to one of active learning (discussion and debate).” (p. 83)</th>
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<td>“This reduction in class time has not resulted in high dropout rates, which has been the at times the criticism of completely online courses (Carr, 2000).” (p. 83)</td>
<td>“The principle reason that students gave for their high level of satisfaction was the time flexibility provided by a blended format.” (p. 84)</td>
<td>“Sands (2002), stated that because of the text-based nature of web-based discussion forums”</td>
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environment, and opportunities for continuous improvement. They state that the challenges faced in developing such a course include a lack of time, support and resources for course redesign, acquiring new teaching and technology skills, plus the risks associated with delivering a course in a blended format. From an administrative perspective, blended learning presents the opportunity to enhance an institution’s reputation, expand access to an institution’s educational offerings, and reduce operating costs. The challenges consist of aligning blended learning with institutional goals and priorities, resistance to organizational change and lack of organizational structure.

and email, blended courses became a “de-facto writing intensive course when teachers work carefully to integrate the online and classroom components.” (p. 85)

-- “Students encountered a number of challenges with blended course, the four key challenges were, the expectation that fewer classes meant less work, inadequate time management skills, problems with accepting responsibility for personal learning, and difficulty with more sophisticated technologies.” (p. 85)

-- Faculty perceived benefits include, enhanced teacher and student interaction, increased student engagement in learning, more flexible teaching and learning environments, and the environment forces continued improvement.
What are the main roadblocks to implementing effective hybrid courses? How can they be overcome?

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<th>Abstract</th>
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<th>Limitations</th>
<th>Conclusions</th>
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| 1. Delfino, M., Manca, S., & Persico, D. (2005). Harmonizing the online and face-to-face components in a blended course on educational technology. *Online Submission, Paper* | This article analyses the relationship between the face-to-face and the online components of a blended course in Educational Technology, run by the Institute for Educational Technology | [http://eds.b.ebscohost.com/eds/detail/detail?vid=2&sid=85cdd41-ff3e-4589-9434-8298ddfb383e%40sessionmgr112&hid=103&bdata=JnNpdGU9ZWRzLWxpdmU%3d#AN=ED500179&db=e](http://eds.b.ebscohost.com/eds/detail/detail?vid=2&sid=85cdd41-ff3e-4589-9434-8298ddfb383e%40sessionmgr112&hid=103&bdata=JnNpdGU9ZWRzLWxpdmU%3d#AN=ED500179&db=e) | No indication is given to the success/failure of the course. | -- “The expression blended learning has been used with a variety of meanings to refer to different kinds of combinations of instructional modalities (or delivery media), of...
1. The course designers developed criteria for harmonising and integrating the two educational modalities, with the aim to take advantage of their specific features. These criteria derive from a multidimensional model that comprises four aspects: course themes and content (cognitive dimension), teaching and learning strategies (teaching dimension), interaction among participants (social dimension) and reflection on the learning path and the teaching profession (meta-cognitive dimension).


Results are limited to a single institution only.

2. This study was instigated when 12 teacher education students expressed four concerns about their hybrid courses:

- "Dean's instructional methods, or of online and face-to-face instruction (Bonk & Graham, 2006).” (p. 1)

- “In contrast to single-modality training models, the blended model actually requires specific instructional design criteria and methods. In fact, pedagogical decisions imply a revision of concepts and a reorganization of teaching and learning dynamics. These, in turn, depend on a variety of conditions, such as the learning needs, the context requirements, the nature of the contents to be delivered, the degree to which they are to be covered, the resources available, etc. “ (p. 2)


Results are limited to a single institution only.

Before satisfaction with the integration of technology can occur for hybrid courses that still rely on some
Concerns” to refine hybrid instruction. *International Journal Of Teaching And Learning In Higher Education, 23*(2), 150-165. Retrieved from ERIC

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<th>Concerns” to refine hybrid instruction. <em>International Journal Of Teaching And Learning In Higher Education, 23</em>(2), 150-165. Retrieved from ERIC</th>
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<td>(part online, part face-to-face) to the college dean. In an effort gain the perspective of the broader population of students so instructors could improve this delivery method in the college, faculty-researchers sought input related to the &quot;Dean's Concerns&quot; from all students enrolled in hybrid courses. A broadly distributed questionnaire revealed that attitudes towards hybrid courses were positive, but that some problems existed related to student abilities to access course content, relevance, social communications, and their instructors' ability to use technology. Faculty-researchers were not able to determine the effect of any pedagogical changes imposed by technology on student perceptions. Researchers conclude that significant innovations in education can create growing pains for</td>
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<td>face to face processes, instructors must first explore hybrid delivery and be satisfied with: 1) online interactions, 2) technical support, 3) their learning experience in developing and teaching the course, 4) the discipline area in which they teach. (Shea, Pickett, &amp; Li, 2005)” (p. 151)</td>
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-- “Institutions that thoughtfully examine more than the influence of the innovation on their profit or cost savings may be able to move more smoothly through the reform process. The move to hybrid instruction can and should be leveraged as a way to provide major shifts in instructional design and pedagogy; students can provide a valuable first hand perspective to that initiative one that can be very candid and insightful
students, but these kinds of pains should be anticipated and accounted for, and that students have an important role in exposing growing pains and can support efforts to improve distance learning.

if they are invited to “engage in debate, decision making, new knowledge creation and action for change” (Ashton & Newman, 2006, p. 825).” (p.151)

-- “Studies that compare traditional, hybrid, and online learning show that from the student perspective hybrid outranks other methods. For example, Biggs (2006) found that in comparison to distance and traditional students, hybrid students felt instructors met or exceeded their expectations, including their instructor’s ability to respond more promptly, give more valuable feedback, and provide an easy method of contact.” (p. 152)

-- “instructor adoption of best practices for blending online and face to face delivery proves to be a critical factor in
student satisfaction. But confounding variables have made it difficult for instructors to make improvements in this teaching model. For example, regardless of age or gender, students who are experienced with the Internet report they are more satisfied with the quality of the web based components of instruction if factors such as collaboration, real world problems, evaluation of viewpoints, and the use of students’ inference and critical thinking skills are used in ways that advance their learning (Holmes & Gardner, 2006; Koohang & Durante, 2003). Similarly, students grant preferential status to hybrid instruction if they feel a complex learning environment is created that considers how their individual needs can be supported by online
technologies (Smart & Cappel, 2006). (p. 152)

-- “The top four drawbacks to online learning mentioned most often were: instructor and technology issues, too much work, communication barriers, and personal concerns” (p. 156)

-- “Of primary concern were technical issues that impeded student learning, followed by a general lack of organization. Instructors who displeased students most were unclear in their expectations for course activities and assignments; communicated unsuccessfully in class, by email, and in other written documents; and employed awkward deadlines and grading procedures. Technology issues also caused confusion in terms of general logistics. Students
expressed troubles finding materials in BlackBoard, TaskStream, and elsewhere online; completing assignments in Blackboard, e.g., quizzes and tests which disconnected midway through assessment completion; accessing the Internet, e.g., slow connection speeds, pop-ups; and dealing with other miscellaneous technology nuisances. (p. 158)

-- “student respondents (12.5%) wrote that online activities caused problems when they needed clarification or instructional support and instructors were non-responsive within “reasonable” time parameters. Some students also expressed that they missed communicating and socializing with their instructors and peers in a face-to-face
“student respondents (8.6%) relayed that the most difficult challenge about participating in a non-traditional, hybrid course was making necessary personal adjustments. These students expressed that their academic success was complicated by issues of managing time, becoming self-directed learners, not procrastinating, and remembering when things were due.” (p. 158)

-- “One concern of students worth discussing was students’ feelings about their capabilities and limitations to access and learn about the course content. This concern was established through complaints of instructors (mostly faculty-associates and lecturers) who were ill-prepared to teach the content, or who lacked
Despite the fact that online education continues to grow, the vast majority of faculty remain skeptical that online courses can yield the same student learning outcomes as traditional face-to-face courses. In an effort to determine if online graduate courses can be effective, in this study we explore the extent to which qualities commonly found in graduate-level seminars can be replicated in hybrid graduate-level courses. A course for students in a higher education graduate program titled “The American Community College” serves as the study case. The course was developed as a hybrid with synchronous, asynchronous, and in-


Relatively small sample of 33 students only.

-- “In fact, in a 2013 survey of 2,251 professors, Inside Higher Ed found significant skepticism among faculty members about the quality of online learning (Lederman and Jaschik 2013) in comparison to the traditional classroom. Only one in five of the faculty surveyed agreed that online courses could achieve learning outcomes equivalent to those of in person courses, and the majority considered online learning to be of lower quality than in-person courses on several key measures.” (p. 100)

-- “Further, technology cannot be an add-on for its own sake, but must be an integral course
person elements intended to foster highly interactive exchanges of information, deep analysis of subject matter, and advanced means of communicating one's ideas; all elements of a successful graduate-level course. Web technologies including wikis, blogs, and podcasting provided creative and varied pedagogical tools, which could be fully realized only when students were immersed in the online learning environment. Data collected from students across two semesters and assessment of learning outcomes indicate the value and success of the approach and several advantages to in-person courses, generating a set of implications.

component, wholly in support of established goals and objectives (Fitcher, 2005). In graduate programs, the greatest difficulty in integrating technologies lies in adopting this new mindset and “retiring” long-held views of what it means to teach at the advanced level.”

(p. 101)

-- “The challenge of designing an online or hybrid course is significant and, in this case, preparation time was approximately three times greater than what would be spent planning for a face to-face course, even though the instructor had taught online and hybrid courses in the past. Much of that time was devoted to developing interactive elements and assignments that would function well and meet the course goals in an
online learning environment. As a result, instructor time spent on course preparation was greatly reduced when teaching the course a second time. “ (p. 102)

-- “Table 1 specifies each of the learning outcomes and the extent to which students met course expectations, the vast majority of students were able to meet or exceed all of the expected learning outcomes. This table was prepared by reviewing students’ performance on the major assessments, which were evaluated using a customized rubric to measure student learning.” (p. 103)

-- “A high percentage (88%) of students thought that the online environment offered increased opportunities to interact with experts in the field.” (p. 104)
“One student wrote, “I think the multiple genres worked incredibly well. It kept the workload fresh and challenging.” (p. 105)

“the vast majority of students indicated that the quality of their interaction with one another and the instructors was somewhat or much enhanced in this hybrid course than in a face-to-face course.” (p. 105)

“At the same time, the challenges of an online or hybrid graduate course should not be underestimated: preparation time can be significant, appropriateness of course expectations can be difficult to benchmark, course delivery can be demanding, and technology can be unpredictable (Vaughan 2007).” (p. 105)
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<td>Online teaching is pervasive throughout higher education today. At the same time, traditional universities have struggled to address the increasing competition coming from purely online universities. Online teaching's impact on learning has been mixed (Gerbic, 2011), but hybrid online teaching, which includes significant face-to-face and online elements, offers pedagogical tools that may enhance the learning of students. Over the past few years, Northern Kentucky University's Department of Communication has offered hybrid online communication courses with great success. This article describes NKU's experience and offers recommendations for best practices in hybrid online teaching.</td>
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<td>-- “The effectiveness of the pedagogies varies greatly and depends in large part on how the individual instructor utilizes the information technologies to promote student learning (Tamim, Bernard, Borokhovski, Abrami, &amp; Schmid, 2011). (p. 41)</td>
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| -- “Of particular note is a list of ten questions for faculty to consider as they develop the course. These questions include: 1. What do you want students to know when they have finished taking your hybrid course? 2. As you think about learning objectives, which would be better achieved online and which would be best achieved face-to-face? 3. Hybrid teaching is not just a matter of transferring a portion of your traditional course to the Web. It involves developing challenging
and engaging online learning activities that complement your face-to-face activities. What types of learning activities do you think you will be using for the online portion of your course?

4. Online asynchronous discussion is often an important part of hybrid courses. What new learning opportunities will arise as a result of using asynchronous discussion? What challenges do you anticipate in using online discussion? How would you address these?

5. How will the face-to-face and time out of class components be integrated into a single course? In other words, how will the work done in each component feed back into and support the other?

6. When working online, students frequently have problems scheduling
their work and managing their time, and understanding the implications of the hybrid course module as related to learning. What do you plan to do to help your students address these issues?

7. How will you divide the percent of time between the face-to-face portion and the online portion of your course? How will you schedule the percent of time between the face-to-face and online portion of your course, i.e., one two-hour face-to-face followed by one two-hour online session each week?

8. How will you divide the course-grading scheme between face-to-face and online activities? What means will you use to assess student work in each of these two components?

9. Students sometimes have difficulty acclimating
to the course Web site and to other instructional technologies you may be using for face-to-face and online activities. What specific technologies will you use for the online and face-to-face portions of your course? What proactive steps can you take to assist students to become familiar with your Website and those instructional technologies? If students need help with technology later in the course, how will you provide support?

10. There is a tendency for faculty to require students to do more work in a hybrid course than they normally would complete in a purely traditional course. What are you going to do to ensure that you have not created a course and one-half? How will you evaluate the student workload as compared to a traditional
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<td>He, W., Gajski, D., Farkas, G., &amp; Warschauer, M. (2015).</td>
<td>This study explored a modified version of hybrid instruction, referred to as the flexible hybrid format, in a lower division electrical engineering course offered at a large public university. The objective of the study is to use longitudinal data to investigate the impact of class attendance, out-of-class study time, and motivation on student exam performance. Generalized least squares and fixed effects models were used in the analyses. It was found that class attendance was indispensable; it was associated with exam performance even when all essential course material was made available online and students generally rated the online instruction component to be of higher quality. The benefit of class attendance was then explained by the ICAP</td>
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<td>doi:10.1016/j.compedu.2014.09.005</td>
<td>Study was limited to Electrical Engineering students only.</td>
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**Study:**

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-- "the present study experimented with a new version of hybrid instruction, referred to as the “flexible” hybrid format. The primary feature that distinguishes this hybrid version from the preceding pedagogies is the complete autonomy given to the students. By design, all course material was released online one week before class, and class attendance was made optional. Therefore, students could freely decide how they wanted to approach this course. Depending on their learning behavior in and outside the classroom, students could take this class as a typical lecture course, a pure online course, a hybrid course with both online and in-class components, or a flipped class where pre-lecture studying was enabled and strongly
hypothesis and spaced learning practice and it was suggested that online education might be more effective in teaching relatively simpler contents. Out-of-class effort significantly predicted performance in previous weeks, but not in the final period. The harmful effect of cramming was cited to explain this phenomenon. Hence, by implication, time management might be an issue in a flexible hybrid environment. Finally, motivation was found to be a robust predictor of performance and its effect was the strongest when the course was at its most challenging stage. Besides, the relationship between motivation and exam performance was likely to be bidirectional, as higher motivation resulted in better performance, which in turn further boosted motivation.

encouraged.” (p. 60)

-- “The rationale for implementing a flexible hybrid instruction is as follows: (a) different students have distinct learning styles and preferences (Lage et al., 2000); (b) mismatches between instructional styles and student preferences could hurt student motivation (Charkins, O'Toole, & Wetzel, 1985) and performance (Borg & Shapiro, 1996; Ziegert, 2000); (c) multiple instructional channels support this diversity and hence potentially improve student satisfaction, motivation, and performance.” (p. 60)

-- “In class, the professor would revisit some key concepts to emphasize their importance and then asked the TAs to lead the class by going through all sample
Based on current findings, directions for future research were also suggested to verify our claims and improve our implementation.

Since there was no new information that was available online. Since no new information was introduced in class, class attendance must have exerted its influence by means unrelated to content difference. In other words, the benefit of attending live lectures must be more than receiving instructional information; and simply providing identical information online will not make traditional lectures useless.” (p. 65)

-- “Since the ICAP hypothesis assumes that interactive engagement is most effective in producing deeper learning, followed by constructive, active, and passive modes, it explains why in our case attending lectures had an advantage over self-study with the same material covered in online videos. In a sense, although the present study was not
intended to be a flipped classroom, the flexible hybrid format might accidentally induce some of its benefits, especially for those who had studiously studied before class and actively engaged during class meetings.”

(p. 65)

-- “the course progressed quickly from one subject to the next with later parts of the course heavily relying on prior knowledge taught in previous sessions. Therefore, if a student was not putting due effort into the course in previous weeks, he or she would find it increasingly difficult to keep up with the course as it progressed toward to end. Predictably, such students would have to increase effort in the final weeks in order to compensate for their prior lack of effort... the students who seemingly
spent more time in the final weeks might fare poorly in the final exam and become the high leverage cases that were weighing down the linear fit. This finding has deeper implications, as it suggested that time management could be a pressing problem in a flexible hybrid learning environment, where class attendance was only optional. (p. 65)

-- “Further, it is also suggested that online education could be more effective in teaching simpler and easier content. As the course material got challenging and/or the clarity of online videos started to drop, the positive sides of face-to-face instruction took effect and hybrid instruction became superior to online instruction.” (p. 66)


Universities have moved increasingly towards 'blended' and online course delivery for both undergraduate and graduate programs. In almost all cases, elements of online teaching are part of routine teaching loads. Yet detailed and accurate workload data associated with 'e-teaching' are not readily available. A search of the international literature indicated that there is limited rigorous literature and research that points to the actual effects on workload in online and blended higher education teaching environments. This paper reports on a research project in four Australian universities, and the perceptions of a representative group of staff who perceived that e-teaching had increased their 'teaching time' workload, and that Workload Allocation Models (WAMs) did not policies and may not reflect the policies of other institutions world wide.

Twigg (2003) funded by the US PEW Charitable Trust at Rensselaer Polytechnic Institute showed average savings of 40% through replacement of tenured academics with teaching assistants, and the substitution of laboratory and tutorial time with online exercises” (p. 5)

-- “This research found that most Australian universities do not have explicit and consistent centralised procedures or guidelines for allocating academic workload, which take into account the specific activities associated with online-only or blended learning.” (p. 6)

-- “Staff overwhelmingly perceived that their workload allocation did not sufficiently account for the additional workload engendered by e-teaching, whether in fully online or web-
take account of contemporary teaching modalities.

supplemented/blended modes.” (p. 6)

-- “Other studies point to the costs of development: for example, Chapman Alliance (2013) posits a summary cost analysis:
• On average, the development ratio for blended learning is 49:1, meaning it takes 49 hours to create one finished hour of blended learning (on average).
• Using data from 188 survey respondents, the average price per finished hour of blended learning is $3938 (AUS $).
• Changing “new” content can increase your development ratio to 69:1.
• When “repurposing” existing content (for 60% or more of the blended course) the development ratio average drops to 22:1.
• Outsourcing content takes less time than the overall average (31:1),
but the cost per finished hour goes up by an additional $1158 per finished hour (vendor markup).” (p. 7)

-- “. In all, staff perceptions are that current workload models based on equivalent full-time student load are inadequate proxies for allocating workload when teaching online. Such workload formulas fail to take into account variable costs, for example, multimedia delivery formats; other support such as educational development, IT equipment (software and hardware); additional staff; staff informal development; opportunity costs (early adopters and innovation); diverse student cohorts; the advent of Work Integrated Learning; committee work; or the plethora of additional “coordinator tasks” such as “Study Abroad
-- “As this participant notes: “Operating in the online environment, I think it actually increases workload. I think teaching online and learning online is meant to be—you know, less contact hours. I’ve found it hugely increases the number of contact hours.” (p. 10)

-- “This investment—in ICTs and teacher time—would be tolerable if it actually resulted in a reduction in total teaching hours. However, the reality is that the use of ICT usually involves an increase in teaching tasks and hours. These include the time reading and responding to emails, hosting chat sessions and moderating bulletin boards. This has had a consequent impact on staff workloads.” (p. 10)

-- “Staff are perplexed by how they can reduce
their teaching hours, without the loss of quality learning, as they believe that students now depend on the interactivity and connectivity and “service” of web-enabled education.” (p. 11)

-- “The sector must therefore acknowledge that “flexibility” costs, and will impact fixed, variable and opportunity costs. Staff should be enabled to participate actively in their professional development and have their work recognised and valued within performance assessment, development and review. Institutions should ensure business processes and infrastructure are adequately resourced.” (p. 13)

How do you promote the concept of hybrid courses?
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<td>Bai, X., &amp; Smith, M. B. (2010). Promoting hybrid learning through a sharable eLearning approach. <em>Journal Of Asynchronous Learning Networks, 14</em>(3), 13-24. Retrieved from ERIC</td>
<td>Educational technology is developing rapidly, making education more accessible, affordable, adaptable, and equitable. Students now have the option to choose a campus that can provide an excellent blended learning curriculum with minimal geographical restraints. We explored ways to maximize the power of educational technologies to improve teaching efficiency and cut costs without sacrificing high quality or placing an extra burden on faculty. This mission was accomplished through adaptable e-learning content design and development. We developed scalable, shareable, and sustainable e-learning modules as textbook chapters that can be distributed platform independently. The resulting e-learning building blocks can be used to construct a variety of learning experiences.</td>
<td><a href="http://eric.ed.gov/?id=EJ909880">http://eric.ed.gov/?id=EJ909880</a></td>
<td>Study was limited to computer literacy courses at a single institution only.</td>
<td>-- “Rapid prototyping based upon the ADDIE (Tripp &amp; Bichelmeyer, 1990), instructional design model was applied, which include the following system design phases: Analyze, Design, Develop, Implement, and Evaluate. This instructional device helped us analyze our students’ learning needs, review existing resources, design and develop e-learning module materials, implement modules into chapters, and evaluate usability.” (p. 16)</td>
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automate the assessment processes, provide just-in-time feedback, and adjust the teaching material dynamically based upon each student's strengths and weaknesses. Once built, these self-contained learning modules can be easily maintained, shared, and re-purposed, thus cutting costs in the long run. This encouraged faculty to share their best teaching practices online. The end result of the project is a sustainable knowledge base that can grow over time, benefiting all the disciplines through knowledge reuse and sharing.

interoperability, accessibility and reusability of web-based learning content for industry, government, and academia. It aims to achieve the ideal of learning anytime anywhere through enabling any SCORM-conformant elearning content, developed with any authoring tool, to be distributed to any learner, from any platform, by any SCORM-conformant LMS. Today, most major LMSs and educational software vendors comply with this standard for creating and deploying elearning.” (p. 16 & 17)

-- “We would like to have our future participating faculty members to have an opportunity to share their learning modules beyond their specific knowledge domain. For instance, an instructor building Geology elearning modules could adopt SCOs on Chemistry foundations.
Students will benefit the most by receiving instruction from experts across disciplines using the shared and reassembled elearning modules." (p. 21)

-- “Ownership and intellectual property issues could prove to be an impediment to adoption broadly by professors. The creator of each SCO would be its owner and would have the option of not including it in the knowledge base. Also, instructors could decide to create SCOs and make them available only in limited circumstances. We hope to encourage an OpenCourseWare model that will be under some form of a Creative Commons License.” (p. 21)

-- “We have been in direct contact with the Blackboard’s developers of their SCORM plug-in. They communicated that
there is a lack of motivation to make Blackboard fully SCORM-conformant, as few universities have allocated resources to develop SCORM-based elearning contents. Blackboard’s stance seems emblematic of academia’s current level of interest in SCORM.”
(p. 22)

How do you develop a hybrid course? (nuts and bolts)

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<th>Limitations</th>
<th>Conclusions</th>
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| 1. Alim, F. (2007). Evaluation of a blended course from the viewpoint of constructivism. *Online Submission, Paper presented at the International Educational Technology (IETC) Conference (7th, Nicosia, Turkish Republic of Northern Cyprus, May 3-5,* | This paper was written to evaluate an undergraduate course, Internet Applications in Education, given at Computer Education and Instructional Technologies department at Middle East Technical University in Turkey. In this paper, the researcher analyzes | [http://eds.b.ebscohost.com/eds/detail/detail?vid=1&sid=8b800b6d-bf1b-48e5-aef2-089dc5f74de7%40sessionmgr112&hid=103&bdata=JnNpdGU9ZWRzLWxpdmU%3d#AN=ED500169&db=eric](http://eds.b.ebscohost.com/eds/detail/detail?vid=1&sid=8b800b6d-bf1b-48e5-aef2-089dc5f74de7%40sessionmgr112&hid=103&bdata=JnNpdGU9ZWRzLWxpdmU%3d#AN=ED500169&db=eric) | viewed entirely from a constructivist viewpoint only. | -- “In the class hours of this course, the instructor encourages students to make a classroom discussion on a topic that is related to the course... This kind of classroom discussion or collaboration is emphasized as a critical feature in constructivist learning environment by
underlying design rationalities of this course from the viewpoint of Constructivism. After analyzing, Internet Applications in Education course, the researcher saw that many of the constructivist instructional strategies are used effectively in this course. Some different technologies are used, because in constructivism, there is a need for information to be presented in a variety of different ways (Ertmer & Newby, 1993). Eventually, the researcher strongly support the idea of Ertmer & Newby (1993), “to be successful, meaningful, and lasting; learning must include all three of these crucial factors: activity (practice), concept (knowledge), and culture (context) (Brown at al., 1989 cited in Ertmer & Newby, 1993). Since all these components are used effectively, it is a

Driscoll (2000), because “learners test their own understandings against those of others, notably those of teachers and more advanced peers” (p.377), and then, they recreate their knowledge by assimilating multiple perspectives of these people.” (p. 1)

-- “First, there are introduction and syllabus pages, from which the students can gain a basic understanding of the course, and objective page, which shows what the students will accomplish as a result of the lesson. More, the used instructional strategies are written in order to make the students aware of which strategies will be used to achieve the goals.” (p. 2)

-- “Second, there is a grade page which includes a full-description of grading. Also, it shows when and which page the
successful lesson in which constructivism is integrated influentialy.

user visited each week and the total time the user stayed in the website. There are two advantages of showing the grading in such a way. First, it promotes self-evaluation and reflection to maximize the student's responsibility. Second, it helps the teacher to assess the student's progress continuously. Likely, in constructivism, it is important to observe the students to help and support them.” (p. 2)

”Third, there is a lecture page, which includes tutorials about the course topics, such as Photoshop, Flash, HTML etc... In these pages, there is a learner-to content interaction, where the students access the content at their own convenience and complete it at own peace.” (p. 2)

”Fourth, there are homework and self-study pages. After the students
study on the lecture pages on their own pace, they apply these knowledge by doing homework in the lab-hours. There are clear instructions about how to do the homework in order to provide a meaningful context to guide them (Driscoll, 2000).” (p. 2)

“Fifth, there are links and e-sources pages which include some extra tutorials and links of some useful internet pages respectively.” (p. 2)

“Finally, some asynchronous communication tools, e-mail and forum, and synchronous communication tools, chat and group chat are available for students use in this web page.” (p. 2)

2. Aly, I. (2013). Performance in an online introductory course in a hybrid classroom setting. *Canadian Journal Of Higher Education, 43*(2), This study compared the academic achievement between undergraduate students taking an introductory managerial accounting course online

Limitations include the fact that the study was conducted at a single university and for a single course taught by one instructor. Furthermore, “Abraham (2007) examined the participation and performance of graduate engineering students enrolled in two sections of
(N = 104) and students who took the same course in a hybrid classroom setting (N = 203). Student achievement was measured using scores from twelve weekly online assignments, two major online assignments, a final examination held on campus, and overall course performance. This study found that students receiving only online instruction were as successful as students receiving hybrid classroom instruction. These findings suggest that course instruction and pedagogy are more important for student learning than the type of media delivery, and online instructors should focus their effort on quality in developing online courses.

Data was collected for only one semester, and the assignment of students to each group was not random as the students had the choice of enrolling in any group. A financial management course over two different semesters, with one section using a traditional approach and the other section using a hybrid approach. Students in the hybrid environment displayed increased participation in non-compulsory assignments and achieved higher marks in both in-session and final examinations.” (p. 87)

-- “Jones and Chen (2008) reported that MBA accounting students in hybrid learning sections had more positive group work experiences and more positive perceptions of instructor feedback compared with students in a face-to-face section.” (p. 87)

-- “After reviewing characteristics of successful learning environments, Bransford, Brown, and Cocking (2000) concluded that
effective learning depends on creating virtual spaces that advance and support active learning.” (p. 88)

-- “In the first environment—called learner-centered—the constructivist approach recognizes the importance of the learner’s unique knowledge, skills, and attitudes, and believes that the learner can contribute to the learning experience (Bransford et al, 2000). The learner centered environment focuses on the goals, objectives, needs, and interests of the learner. It provides learning activities that are designed to give learners more responsibility, ownership, and understanding of their learning relative to face-to-face instruction. “ (p. 88)

-- “The second environment is called knowledge-centered. Here, the constructivist
approach focuses on the structure and type of activities that enable students to construct robust understandings of particular topics (Bransford et al, 2000). Such activities do not focus on memorization, but rather on integrating the material with personal experiences and motivating students to do the work of the discipline.” (p. 88)

-- “The third environment, assessment-centered, highlights the importance of providing meaningful feedback and assessment to learners (Bransford et al, 2000). According to the constructivist approach, self-assessment is not only crucial to learning, but also to the assessment and feedback required within online activities. The constructivist theory also emphasizes the importance of the learner continuously reconstructing his or her
knowledge—that is, evolving and changing his or her understanding—in response to feedback (Swan, 2005).’ (p. 89)

— “The fourth environment, community-centered, elaborates the importance of structuring learner communities through social interaction, collaboration, and cooperation (Conole, Dyke, Oliver & Seale, 2004; Neo, 2008; Siemens, 2004; Snyder, 2009).’ (p. 89)

— “For online learning to flourish, it is first imperative that quality and diligence be put into the design and delivery of course materials. Online instructors should focus on encouraging online learners to interaction with each other and with the instructor in order to develop a community in the virtual realm, thus opening the doors to active learning and a free
interchange of knowledge." (p. 94)

-- "as Norton and Hathaway (2008) suggest, it is essential that instructors understanding the online learning process and use that knowledge to build learning communities within the class. It is also important for instructors to facilitate higher level thinking skills and reflection, as well as promote problem solving through interactive problem-based activities." (p. 94)

-- "A continued understanding of learning theory and learning environments needs to be emphasized among faculty. This is critical if courses are to be designed to address the various domains of learning." (p. 94)

-- "to attain a high level of success, online instructors
should be able to quickly adapt from a teaching role to that of coach and facilitator. Online instructors need to focus their efforts on designing a learning environment that advances and supports active learning based on the four overlapping environments: learner-centre, knowledge-centre, assessment-centre, and community-centre. “

(p. 94)

— “the online learning environment depends on student engagement. This requires instructors to think outside the box and focus on the goals, objectives, needs, and interests of the learner; use online and face-to-face resources in ways that support understanding and future transfer of knowledge; use assessments to help learners understand material through consistent and meaningful
feedback; and promote a sense of connectivity and collaboration through integrated online activities. “ (p. 94)

How do you train instructors?

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| 1. Kakosimos, K. (2015). Example of a micro-adaptive instruction methodology for the improvement of flipped-classrooms and adaptive-learning based on advanced blended-learning tools. *Education For Chemical Engineers, 12*, 1-11. doi:10.1016/j.ece.2015.06.001 | A teaching approach that emphasizes on student to instructor feedback. • Instructor adapts content of lectures based on information collected prior to class. • A multimedia platform to deliver blended learning material and collect feedback. • Evaluation showed improvement at both the comprehension and perception of students | [http://resolver.ebscohost.com/openurl?sid=EBSCO%3aedselp&genre=article&issn=17497728&ISBN=&volume=12&issue=&date=20150701&page=1&pages=1-11&title=Education+for+Chemical+Engineers&atitle=Example+of+a+micro-adaptive+instruction+methodology+for+the+improvement+of+flipped-classrooms+and+adaptive-learning+based+on+advanced+blended-learning+tools&aulast=Kakosimos%2c+K.E.&id=DOI%3a10.1016%2fj.ece.2015.06.001&site=ftf-live](http://resolver.ebscohost.com/openurl?sid=EBSCO%3aedselp&genre=article&issn=17497728&ISBN=&volume=12&issue=&date=20150701&page=1&pages=1-11&title=Education+for+Chemical+Engineers&atitle=Example+of+a+micro-adaptive+instruction+methodology+for+the+improvement+of+flipped-classrooms+and+adaptive-learning+based+on+advanced+blended-learning+tools&aulast=Kakosimos%2c+K.E.&id=DOI%3a10.1016%2fj.ece.2015.06.001&site=ftf-live) | Small sample group, 34 students only. | -- “In blended learning, computer-based technologies have a central role. It spans from enhancing classroom teaching and learning activities to access control and tracking of individuals records and performance (Bonk and Graham, 2006; Wu et al., 2010).” (p. 2) -- “This study demonstrates a micro-adaptive instruction (mAI) methodology for the improvement of flipped classrooms and adaptive-learning. mAI focuses on the collection of
information and student’s feedback prior to lecture and off class-time. Then the instructor can use this information on designing the flipped-classroom or simply adapting the content of the next lecture. mAI is based on the development and deployment of advanced blended learning tools.” (p. 2)

-- “Information technology tools are important for the implementation of the proposed methodology, mAI. At the same time, the context design of the course has to comprehensive, clear, attractive and adaptable on such tools. Here, the main two tools are a multimedia platform and the host of the platform.” (p. 4)

-- “Context Design:
1. The first step is to structure the topic material while breaking it down into three parts:
concept, methods and application (examples). The first part presents all new concepts and definitions, again following a piecewise approach rather than throwing one after the other.

2. In a similar manner, the second part, “Methods”, initially states the problem(s) that link one or more of the concepts. Then, it guides the student through the steps to achieve a qualitative solution.

3. All of the above, they are the “frontend” and what the student sees and interacts with. In parallel and the “backend”, the platform, a more technical description follows, collects relevant information for the implementation of the methodology. There are three types of information collection tools: (a) quizzes and problems, (b) self-assessment questions
and (c) user’s interaction with the platform (clicks, active time). (p. 5)

— “A few more words about the multimedia development tool Storyline®, which offers a rich developing environment with a high-level user interface. One can directly import existing presentation slides or develop new multimedia material following only a small number of steps. The developing environment and options resemble a lot of Microsoft PowerPoint®, which makes the learning curve rather smooth. The content is grouped into scenes to keep it structured... Furthermore, Storyline® seemingly integrates with eCAMPUS – the eLearning Management System of Texas A&M University (based on Microsoft Blackboard Learn®). Students can access the platform via any web
browser (desktop and mobile versions) that supports Adobe Flash® or even download a standalone player for Apple® iOS.” (p. 6)

-- “In addition, instructors are always skeptical for the adaptation of any new technique without careful evaluation and analysis from a number of perspectives. Therefore, the author adapted the triangulation method for the evaluation as proposed by Patton (2002). Triangulation is a method of cross-checking data (O’Donoghue and Punch, 2003), in this case the evaluation outcome, by using multiple metrics (sources) to identify regularities. The tools selected for this study are similar to what Stuart (2014) proposed to evaluate a blended learning approach for safety training, these are:

1. Active time spent on the platform.
2. Student’s performance.
3. Self-assessment and survey.” (p. 6)

“Indeed, the majority of the students agreed that the collected information helped the instructor to adapt properly the teaching to their individual needs. Similarly, the vast majority believed that the platform enhanced their understanding. On average students spent 37 active minutes on the platform while a quarter spent more than 60 min. This duration is quite significant compared to the necessary minutes just to scroll through the material (less than 10 min). (p. 10)

How do you measure effectiveness vs. online or face to face courses?

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designed for teacher candidates. Teacher candidates developed multimedia-based projects by means of multimedia tools. This research aims to determine the effects of online and blended learning approaches on the success level of multimedia projects and the teacher candidates' attitudes, opinions and perceptions on e-learning. This study used a combination of qualitative and quantitative methods. There were two different groups in the study: online and blended groups. The online and the blended groups consisted of 30 and 32 teacher candidates, respectively. Teacher candidates in the blended group developed multimedia-based projects and shared information communicating in a WiziQ and Facebook environment with their teacher candidates were surveyed.

[click for article](http://host.com/login.aspx?direct=true&db=cph&AN=97015209&site=eds-live)

commonly reported obstacles of online education (Hara and Kling, 2000; Smyth, Houghton, Cooney, & Casey, 2011; Welker and Berardino, 2005). Information technology (IT) ability and access may affect students' ability to engage in the online environment (King, 2002). For this reason, the tools that can be accessed easily by the student must be chosen. The research carried out in this field reveals that Facebook and Web 2.0 tools are commonly used by the students (Hew, 2011; Uzunboylu et al., 2011). In addition, traditional teaching roles become less clear; and some educators may focus on the technology and disregard the learning goals (Twomey, 2004).” (p. 530 and 531)

-- “The main Constructivist models aim to make exercises which support teacher candidates on
peers and instructors when they were not at school. On the other hand, the teacher candidates in the online group communicated with their instructors and peers only in a WiziQ and Facebook environment. The results showed that the blended learning approach was more effective than the online learning approach. The usability of online learning and blended learning in higher education is addressed in recommendations for future research and practice.

obtaining information via developing their experiences and being objective by transferring their aims as ‘knowledge objects’ (Saljo, 2000). (p. 531)

-- “A blended learning model combines the different advantages of face-to-face education and e-learning to ensure an effective learning environment is provided to the teacher candidates (Kose, 2010).” (p. 532)

-- “Dziuban, Hartman, and Moskal (2004) described the blended learning characteristics as (1) a shift from teacher-centred to student-centred instruction in which teacher candidates become active and interactive learners; (2) increased student–instructor, student–student, student–content and student–outside resources interactions and (3) integrated formative
and summative assessment mechanisms for teacher candidates and instructors. These characteristics make blended learning very effective.” (p. 532)

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At the beginning of the study, the researchers created the [http://www.WiziQ.com/ceit](http://www.WiziQ.com/ceit) address in signing up to WiziQ. An interactive virtual classroom environment was created thanks to the many features of WiziQ profile tools. The advantages of WiziQ profile tools are that they allow the adding of a chat tool, which enables a student to have a chat with instructors and peers synchronously. In addition, from WiziQ, instructors and teacher candidates can send messages to each other. WiziQ, as a technology supported collaborative learning environment model, allows teacher candidates to learn, share,
discuss, chat or construct knowledge by submitting projects and to receive feedback from their friends and instructors to improve their projects.” (p. 535)

“One of the most important advantages declared by the online group teacher candidates’ is the possibility of repeating lectures as much as they wanted. Fatma remarked: ‘I think most important advantage is that we could repeat the course videos when we needed ’ and Cigdem said: ‘Most important advantage is repeated feature of videos’. (p. 540)

“Some of the teacher candidates from the Blended group also stated that they had connection problems when the Internet was slow. Tuba remarked ‘When the internet connection was slow In Simultaneous audio video course, the
biggest problem was the asynchronous arrival of video and audio’ and Ezgi said ‘Due to the slow connection, a few times the simultaneous lectures took longer than usual.’” (p. 541)

— “An important result from the experimental study, which was carried out with the teacher candidates studying using a blended learning approach, was the statistically significant higher success rates than those studying using the online learning approach.” (p. 542)

— “The results of the teacher candidates’ interviews confirmed that the teacher candidates, studying with a blended learning approach, have an advantage of receiving feedback just in time from the instructors in the class environment compared to teacher candidates using the online learning
What are effective technology tools to use in a hybrid course?

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<td>1. Alexander, M. M., Lynch, J. E., Rabinovich, T., &amp; Knutel, P. G. (2014). Snapshot of a hybrid learning environment. <em>Quarterly Review Of Distance Education, 15</em>(1), 9-21. Retrieved from Education Full Text</td>
<td>In a time of flat enrollments in traditional higher education, online learning is booming. This article describes how one university evolved its programs to be on the forefront of the fastest-growing segment of online programs, hybrid learning. With a relatively minor investment in infrastructure, classes are delivered simultaneously to students on campus and on the web. The approach is unique in</td>
<td><a href="http://ezproxy.uvu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&amp;db=aph&amp;AN=97849238&amp;site=eds-live">http://ezproxy.uvu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&amp;db=aph&amp;AN=97849238&amp;site=eds-live</a></td>
<td>Results are limited to a single institution only.</td>
<td>— “There are two types of delivery platforms available for Internet based distance education: synchronous (real-time) and asynchronous (delayed time) communications.” (p. 9) — “Saba—a virtual classroom web collaboration software—is used to “extend” the physical classroom to students online, while Blackboard’s learning management system is</td>
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online learning and has generated high student satisfaction and retention. Asynchronous technologies allow in-depth focused studying while synchronous tools (including webcams) engage both on-campus and online students in real-time class discussions. This article also provides a survey of some of the more popular tools used in online learning.

used as a platform for asynchronous learning. In effect, this approach offers the best of both worlds. Web cameras, microphones, and speakers are installed in “smart” classrooms to enable online students to see, hear, and speak in traditional, on-campus classes. The Saba web collaboration voice and video-over-IP (VOIP) software enables both online and in-class students to study alongside each other.” (p. 9)

-- “Blackboard allows the faculty to easily post class materials on course websites. In addition to its document repository functionality... It provides a means for faculty-student and student-student interaction in a given course. To foster a sense of community and establish the basics for networking, Blackboard embeds Blogs and Wikis
into each course website, which are often used to make student profiles available and enable students not in physical proximity to get to know each other. Additionally, it provides a mechanism for student assessments.” (p. 10 & 11)

“Faculty were much more enthused as well about being back in a classroom, with the familiar dynamic of in-person students in front of them while online students watched, listened, and asked questions. To enable live on-campus classes to be taught simultaneously to both on campus and remote students attending synchronously online, the ATC introduced Centra (now Saba) virtual classroom web collaboration software. “ (p. 11)

“ A student teaching assistant (TA) is present in
each class to advocate for the online students by notifying the instructor when an online student virtually “raises” a hand with questions or comments. When instructors recognize online students to participate, their audio comes through speakers built into the ceiling of every hybrid-equipped classroom, which allows both in-class students and instructors to hear them and reply in real time.”

-- “Saba software is structured so that all online students can hear, see, and participate in all class presentations and discussions. They can view any visuals the instructor is presenting such as PowerPoint slides, documents, spreadsheets, or videos, as well as the professor and some of the in-class students via a high-end web camera built into the back wall of
every hybrid-equipped classroom.” (p. 12)

-- “In addition, the software provides the ability for the instructor to group online students into isolated working groups to simulate a separate classroom group work experience.” (p. 12)

-- “One of the technologies recently introduced into hybrid classrooms is the SMART Board... Primary features used in the classroom include: the digital pen, the extended page or new page, the capture feature, and interactivity.” (p. 12 & 13)

-- “Wiki is a communication and collaboration technology that is often used in a classroom to engage students within a collaborative environment. Wikis (from the Hawaiian word for “quick”) are editable
websites that allow users to view and manipulate information.” (p. 14)

-- “Blackboard Collaborate is an academic Instant Messaging (IM) system that allows holding live online meetings via web conferencing. Used as a plug-in to Blackboard, it automatically loads class rosters into “contact lists” for each class to foster impromptu academic discussions anytime and anywhere. This technology lets the instructor and students meet online for after class discussions, office hours, or student group meetings.” (p. 17)


The prevalence of either completely online or hybrid courses has continued to increase over the past decade, but properly designing the delivery mode of these courses remains a challenge. Whereas fully online institutions of

http://eric.ed.gov/?id=EJ1054221

Study was designed to measure the effectiveness of audio within hybrid learning courses rather than the effectiveness of the hybrid courses themselves.

-- “Yelon (2006) sites Clark (2001) and introduces “guided discovery”. In the guided discovery approach, students learn on their own by observing, asking questions, and conducting activities, all of which are coupled by feedback from the
higher education may focus on a purely online delivery format, more traditional colleges and universities have the challenge of balancing online and traditional classroom instruction. Whereas basic hybrid courses may have relied more on visual aids of instruction, this paper focuses on the effectiveness of enhancing these hybrid courses with audio lectures. Hybrid courses were created using PowerPoint slides consisting of a mix of visual and audio instructional delivery modes, and student surveys were subsequently administered at the conclusion of the semester to determine the ultimate effectiveness of audio enhancements.

This paper presents the details of this case study, the corresponding instructor (Yelon, 2006). The guided discovery approach is a preferred approach for hybrid courses because it allows students to learn on their own by observing, and we believe enhancing the observations with audio explanations increases the student's ability to learn, comprehend, and retain; thus closing the potential learning gaps between traditional classroom and pure online instructions. (p. 74)

—Penrose’s (2006) list of how to use visualization in hybrid course design includes the following: Photographs to assist realism; - Drawings (e.g., blueprints); - Diagrams that assist the illustration of flow and direction; - Graphics that enhance text; - Videos that reinforce a concept; - Films that incorporate the corresponding content;
statistical analyses and interpretations, and general concluding recommendations for audio-enhanced course design. Overall, the addition of the audio component to the hybrid course structure made the hybrid course experience more effective, increased the likelihood that the students would take or recommend future hybrid courses that contained audio enhancements, and made it more likely that the students would prefer a hybrid course to a traditional classroom-only course. Continued research is necessary to provide a more active learning experience and class community during the online components, and synergistically utilize classroom time more effectively to truly capture the benefits of both online and traditional instruction using the audio-enhanced hybrid course format and show how concepts are used in real-life settings.” (p. 75)

-- “This paper presented a student-centered case study analysis to determine the effects of enhancing hybrid courses with audio content. Surveys were created and administered to classes consisting of sophomores, mixed juniors/seniors, seniors, and graduate students, and the study was then conducted in two phases. Phase 1 helped establish the overall students’ views pertaining to audio-enhanced hybrid courses, and Phase 2 consisted of larger student sample sizes and more detailed statistical analyses of the survey results.” (p. 82)

-- “Overall, the addition of the audio components to the hybrid course structure was very well received by the students at each class level. Based
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<td>Blogs provide contextualization of the information which is vital to the process of peer support. Through dialogues initiated by blog authors and followed by readers, blog platforms build a viable base of shared experiences and mutual relationships. We employ blogs as interactive learning tools for communities of practice in higher education. Content analysis based on empirical data is used to gauge the blog technology's potential for encouraging interactions between students and the</td>
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<td>The context of learning was narrowly defined, focusing on the learning of technical, procedure-based subject, namely computer programming.</td>
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<td>“Oravec (2002) observed that the blog has</td>
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degree of reflection and peer support exhibited through educational blogs in hybrid learning environments. Investigation of the implications of students' academic achievements on learning preferences is conducted to further assess the usability of blogs with particular reference to educational settings. We conducted content analysis for two consecutive semesters of Programming for Web-based Applications in the fall 2007 and the spring semester of 2008. Results reveal that students offer peer support in the online discussions between class members but they may not demonstrate reflective interactions. The usability study shows a statistically significant difference in learning preferences among students of varying academic performance.

many dimensions that are suited to students’ “unique voices”, empowering them, and encouraging them to become more critically analytical in their thinking. Dailey (2006) considers that the biggest advantage of blogs has more to do with something we always have too little of in the classroom – time. Blogging gives back to our students something that many of us often lack – the time to think.” (p. 5)  

-- “This reflective activity can be demonstrated by students who carry out research, post results to their blogs, and comment on one another in a community of practice as well as in solitary learning at some other time. Students who author comments on the blog entries of others experience an enhanced process of knowledge construction through
collective encouragement of reflective learning (Hall & Davison, 2007).” (p. 5)

-- “Social construction of knowledge through social media such as blogs may help explain why assessing others’ work may be conducive to social learning. The fundamental assumption of social construction of knowledge is that interaction among peers, while performing appropriate tasks, facilitates learning of critical concepts (King, 1989).” (p. 5)

-- “Students are encouraged to read the instructor blog before the class meets so that they can get themselves better prepared. After finishing a lab in class, students are asked to submit their results at their own blogs and make a link in the format of a comment at the instructor’s blog with regard to the finished lab. From the instructor’s
point of view, the links serve the purpose of online notices to instructors. Pursuing the links and checking out students’ blogs, the instructor can grasp immediate understanding of students’ progress, such as how many have finished labs, how good the results are, and what problems they may have run into.” (p. 6)

-- “One of the well-known features in blogs is intrinsic easiness for one to express in free styles. By contrast, some of the traditional lab sheets are designed for students to answer a sequence of questions one by one. We see that higher achieving students prefer to blog, while lower achieving ones prefer to use traditional reports.” (p. 14)

-- “For students who are on a low academic level, blogs provide little
guidance as tools to do their work. On the other hand, the higher achieving students showed their talents in making blogs appealing by being able to freely have themselves expressed in the styles they chose and/or by using the diversified multimedia they were good at.” (p. 14)

“...It is a rewarding experience to instructors when witnessing higher achieving students help lower achieving ones with the difficulties posted online and soon picked up by the former who provided clues to the solutions. It is not to say that this only happens with blogs. The blogging platform makes this kind of helping process easier to take place naturally and be observed by third parties including instructors.” (p. 15)

| 4. Conole, G., & Alevizou, P. (2010). A literature | https://www.heacademy.ac.uk/sites/default/files/c | In depth Literature review but no new research. | -- “Although the term( Web 2.0), has |
review of the use of Web 2.0 tools in higher education. The Open University. Retrieved February 12, 2016 from https://www.heacademy.ac.uk/sites/default/files/conole_alevizou_2010.pdf

1. no single definition, there is a widespread agreement that it applies to a wide set of functional characteristics, within the context of computer-mediated communication and networked digital media. These not only point to the increased possibilities for publication (compared to earlier generations of the web), but also encourage, and are supportive of, user participation in the uploading and sharing of digital artefacts.” (p. 9)

--- “The social interface of Web 2.0 offers novel ways for connecting people and sharing and discussing ideas. It can be used to support and enhance existing communities for...
“foster the development of new communities of inquiry and exploration.” (p. 10)

“Engagement in Web 2.0 environments provides, it has been argued, more avenues for self-representation, expression or reflection and more organized forms of collaboration and knowledge building. Re-generation of content through remixing and repurposing, as well as networking and group-interaction are common activities.” (p. 11)

“The following categorisation of Web 2.0 activities is derived from a BECTA-commissioned review of Web 2.0 tools in schools (Crook et al., 2008):
• Media sharing.
Creating and exchanging media with peers or wider audiences.

• Media manipulation and data/web mash ups. Using web-accessible tools to design and edit digital media files and combining data from multiple sources to create a new application, tool or service.

• Instant messaging, chat and conversational arenas. One-to-one or one-to-many conversations between Internet users.

• Online games and virtual worlds. Rule-governed games or themed environments that invite live interaction with other Internet users.

• Social networking. Websites that structure social interaction...
members who form subgroups of ‘friends’.

• Blogging. An Internet-based journal or diary in which a user can post text and digital material while others can comment.

• Social bookmarking. Users submit their bookmarked web pages to a central site where they can be tagged and found by other users.

• Recommender systems. Websites that aggregate and tag user preferences for items in some domain and thereby make novel recommendations.

• Wikis and collaborative editing tools. Web-based services that allow unrestricted access to create, edit, and link pages.

• Syndication. ‘subscribe’ to RSS feeds.
feed" enabled websites so that they are automatically notified of any changes or updates to the content via an aggregator.” (p. 11)

-- “Grant et al. (2006) suggest at least three fundamental shifts in thinking about the relationship among knowledge, culture, learning and pedagogy. First, they note that the modes of inquiry encouraged by Web 2.0 practices tend to be less oriented to the traditional disciplinary boundaries of knowledge. Instead, the learner is invited to adopt a conception of knowledge as something available to be personalised or re-appropriated.

Second, Web 2.0 encourages engagement with knowledge in new
ways. For instance, it encourages a more animated browsing and scanning orientation. Third, practices of knowledge production are being altered. In particular, learners are being drawn into inquiry methods that are more collaborative and less solitary. (p. 12)

-- “Web 2.0 technologies and practices provide new mechanisms for inquiry-based and exploratory learning. Distributed collection of data is possible, as are new ways of organising and representing multiple data sources. New tools are emerging for interrogating and analysing data, along with rich social and information environments to support research
In this respect, Web 2.0 invites users to familiarise themselves and develop confidence in new modes of inquiry. It also brings challenges to both learners and teachers in terms of blurring of the boundaries of control in these contexts, as well as raising issues about the legitimacy of information in these new distributed, mixed-environments (e.g. Keen, 2007).” (p. 16)

-- “participants (both the learners and teachers) need to develop the relevant set of skills to be able to be effective co-creators.” (p. 17)

-- “Socially situative learning perspectives emphasise the context within which learning
Web 2.0 tools provide particular opportunities for personalising and contextualising learning. It is now possible to deconstruct resources, tools and activities so that they can be recombined or remixed according to individual preference.” (p. 17)

Though it seems unlikely that Web 2.0 will fundamentally displace the teaching process, it is clear that embracing Web 2.0 practices will mean that more emphasis is placed on teaching processes being situated as active ‘co-learning’ experiences.

Adoption of a more scholarly and reflective approach to teaching practice is clearly a logical strategy to help achieve this shift.” (p. 17)
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<td>This study aimed to develop a practical model for predicting students at risk of performing poorly in blended learning courses. Previous research suggests that analyzing usage data stored in the log files of modern Learning Management Systems (LMSs) would allow teachers to develop timely, evidence-based interventions to support at risk or struggling students. The analysis of students’ tracking data from a Moodle LMS-supported blended learning course was the focus of this research in an effort to identify significant correlations between different online activities and course grade. Out of 29 LMS usage variables, 14 were found to be significant and were input in a stepwise multivariate regression which revealed that only four variables – Reading, Writing, Discussion, and Viewing were significant predictors of course performance.</td>
<td><a href="http://ezproxy.uvu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&amp;db=edselp&amp;AN=S1096751615000391&amp;site=eds-live">http://ezproxy.uvu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&amp;db=edselp&amp;AN=S1096751615000391&amp;site=eds-live</a></td>
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<td>Study was limited to computer systems engineering students at a single institution.</td>
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<td>-- “Many empirical studies have been carried out so far to examine the relationship between LMS usage and student academic achievement. By analyzing specific subsets extracted from the large datasets stored in the LMS (e.g. discussion messages posted, files viewed, time spent online, total hits), researchers try to identify online activities/variables that provide a predictive view of student performance in order to inform instruction or to determine strategies to help students at risk of course failure (Ashford-Rowe &amp; Malfroy, 2009; Milne, Jeffrey, Suddaby, &amp; Higgins, 2012).” (p. 45)</td>
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| -- “View of resources, quiz engagement, reading and posting of messages (in forum, email and chat) and content creation (in wiki and blog) were the variables that best...
and posting messages, Content creation contribution, Quiz efforts and Number of files viewed – predicted 52% of the variance in the final student grade

predicted final grade, explaining over 50% in variability in the data set. These findings support the viewpoint that few LMS-based online learning activities are able to accurately predict educational outcomes in blended learning courses. Therefore, the provision of online tools and resources that promote engagement with content, collaboration with team mates and connectedness with both peers and teachers, should be of high priority during the design and practice of blended learning.” (p. 45)

-- “No matter what the blend of technologies or learning approaches, properly designing and implementing blended learning starts with a re-examination of the intended learning outcomes of the course (Garrison & Vaughan, 2008). Intended learning
outcomes should be clearly stated, meaningful and measurable. Content should be divided into suitable learning chunks and presented in various formats to students, taking into account their different backgrounds and diverse ways of learning. Authentic learning activities and assignments should engage students in active learning, promote the achievement of the intended learning outcomes and be aligned with each other (Reaburn, Muldoon, & Bookallil, 2009). The sequence of learning events should involve the right mix of student–content, student–instructor, and student–student interaction (Gradel & Edson, 2010). Regular feedback about student performance should be provided in a timely manner throughout the course (Salmon, 2013).” (p. 45)
A set of institutional variables (institutional goals and objectives, administrators and faculty members’ goals alignment, organizational capacity, faculty development and course development support, support for online students and faculty, robust and reliable infrastructure, longitudinal data collection and assessment, proactive policy development and an effective funding model) has come to be accepted as critical factors for blended learning success (Moskal et al., 2013). (p. 45)

Campuses have adopted LMSs, like Blackboard and Moodle, to facilitate online, onsite and hybrid courses through their functionalities for content creation, communication, assessment and administration (Piña,
“Given the ease, convenience and accessibility of online resources available through an LMS, it is not surprising that students’ satisfaction with blended learning course delivery is very high (So & Brush, 2008). The integration of human interaction to online learning, the balanced combination of self-paced and team activities and a mix of spoken, written and interactive media, have been proven to be effective in supporting learning for all personality types – visual, auditory and kinesthetic – in diverse blended learning environments (Naveh, Tubin, & Pliskin, 2010; Picciano, 2009; Zacharis, 2010).” (p. 46)

“Several, mainly commercial, applications, such as SPSS, Stata, and NVivo and Web analytics
tools, such as Google Analytics and Adobe's Digital Marketing Suite, can be used as learning analysis tools to create predictive models of potential at risk students or to develop personalized learning recourses or model the collective learning community behavior (Dawson, Heathcote, & Poole, 2010; Siemens, 2013). (p. 46)

-- “As expected, reading and posting messages on forum board, email and chat was found to be significantly correlated with course success, explaining 37.6% of the variation in the final student grade. This finding confirms the general belief that high levels of communication in blended learning settings are strongly associated with successful course completion.” (p. 51)

-- “A rather unexpected finding was that greater
student engagement with online quizzes associated with higher final scores. Previous studies have shown that compulsory online quizzes (Macfadyen & Dawson, 2010) or graded optional online self-tests (Tempelaar et al., 2014), are strong predictors for identifying underperforming students and academic success. In this study however, students were simply encouraged to use optional Moodle quizzes (designed as multiple choice or true/false or fill-in-the-blanks) to assess their understanding of lesson material.” (p. 51)

-- “Three variables that have been floating around in the online learning literature – Total time online, Total LMS hits and number of Online sessions – and are considered as measures of student effort, engagement and participation, were found to have a weak


<table>
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<th>(univariate) correlation with performance grade.” (p. 51)</th>
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<td>“Learning management systems, the main platforms for delivering online instruction today, provide teachers a vast amount of data about how often students log in, how often they post in discussion boards, what they view, how long they stay on the site, etc. Although the extraction of data from the LMS is easy, finding meaningful behavior patterns and relationships that inform effective learning is a time consuming task. Most tracking tools found in current LMSs organize and report data in a complex tabular format, while stand-alone data mining tools, such as SPSS, Weka, Excel with VB macros, and RapidMiner, are rather difficult to use. Data stored in an LMS database needs to be transformed before being analyzed, as</td>
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well as cleaned from noisy data. Without experience in writing complex SQL queries and scripts that combine SQL commands, the only way out for the non-technical savvy users may be to extract data by manually performing tedious filtering loops” (p. 52)

-- “Therefore, deciding what data should be collected and analyzed, and for what purpose, is central. The overall design of a blended learning course, and the particular online activities that support different aspects of the learning circle, such as dialog and communication, collaborative content creation and presentation, project-based group work, individual assessments and online quizzes, can guide the choice of the appropriate variables and the data analysis.” (p. 52)

-- “Finally, since current
LMSs report students' outcomes, by displaying data in the form of a visualization dashboard, without analyzing the learning process itself, there is a need for the development of easy-to-use visual analytic dashboards that provide learners and instructors useful insights through interactive visualizations of the various stages of the learning process.” (p. 52)

What other universities are successfully using hybrid programs?

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track the impact of blended learning on students, faculty, and the institution. These data are used to inform stakeholders and impact policy to improve faculty development and other support structures necessary for success. This iterative loop of continuous quality improvement is augmented by faculty scholarship of teaching and learning research. The evolution of blended learning at the University of Central Florida is used as a model and research collected over sixteen years illustrates that with proper support and planning, blended learning can result in positive institutional transformation.

...Patsy&id=DOI:10.1016/j.iheduc.2012.12.001

Insight, 2011). That finding is not unexpected given the current use of instructional technologies for developing new learning environments. However, the magnitude of that forecast is noteworthy: a 71% decline from 14.1 million in traditional course enrollment in 2010 to 4.1 million five years later. If this prediction is correct, it has monumental policy implications for America’s colleges and universities.” (p. 15)

-- “Operationalizing blended learning:

1. Institutional goals and objectives. Success is goal attainment. For an institution to succeed in blended learning it must have a sense of what goals and outcomes it wants to achieve.

2. Alignment. The institution’s senior executives must play a key
role in formulating goals and objectives for blended learning, as is their right and responsibility. But those goals cannot be the exclusive purview of senior leadership. The faculty must also have a stake in the initiative and its success, and the goals established must ultimately be acceptable to them because blended learning is ultimately all about teaching and learning.

3. Organizational capacity. As important as institutional goals and alignment between administration and faculty can be, they are insufficient to begin or sustain a blended learning initiative. The missing component is the mid-level organizational capacity required to prepare faculty, develop courses, manage the infrastructure, support online students and teachers, and carry out
the myriad other functions that are needed to attain success.

4. Faculty development and course development support. The goal of faculty development is to ensure that online courses are designed and delivered in a manner that leads to expected levels of student learning, mastery, and success in the online environment. These expectations are typically normed against student performance in similar face-to-face classes.

5. Support for online students and faculty. Support for online students and faculty members can take many forms: live telephone support, voice mail with call-back, email, instant messaging, informational Websites containing documentation or tutorial videos, or walk-in centers.

6. Robust and reliable
infrastructure. Blended learning requires the same IT infrastructure elements as other network services: servers, network bandwidth, and remote access. However, the requirements of online learning are more stringent in terms of reliability and consistency of performance than many other network services, requiring that the technical elements be well designed and supported.

7. Institution-level, longitudinal data collection and assessment. One of the most important steps an institution can take when it begins a blended or online learning program is to establish structures for central, longitudinal data collection for purposes of tracking and assessment. These should include both formative and summative data, and should include both quantitative and
qualitative factors.

8. Proactive policy development. The time to develop policies around blended and online learning is before issues or concerns arise and fester until they become rallying points for faculty resistance. The policy areas that typically need to be addressed at the inception of a blended learning initiative are intellectual property ownership, copyright, and workload.” (p. 16 to 18)

— “Blended learning models may be found in higher education (Kaur & Ahmed, 2005), industry (Executive Conversation, 2010), K-12 education (Keller, Ehman, & Bonk, 2004), the military (Bonk, Olson, Wisher, & Orvis, 2002) and in many other sectors. There are formulations based on organizational infrastructures (Khan, 2001) that concern...
themselves with such things as development time, program combinations, cost factors, multiple locations and institutions, and landscape considerations. Learning environment approaches (Norberg, Dziuban, & Moskal, 2011) foster such issues as interaction, constructivism, communication, learning communities, learning enhancements, cognition and performance support, as well as synchronicity. Added value constructs (Graham, 2006) deal with elements such as enhancement, presence, access, reusability, transformation, replacement and process emphasis. Graham (2006) uses this approach to define enabling blends that increase access, enhancing blends that incrementally improve pedagogy, and transforming blends that
create fundamental paradigm shifts.” (p. 16)

-- “Universities can utilize blended courses as a means to maximize utilization of classroom space with the reduced seat time component. In these economically difficult times, funding for additional classrooms is often scarce, yet enrollments continue to grow. Blended learning can help provide access to students by allowing multiple courses to occupy the classroom space previously occupied by one face-to-face section.” (p. 20)

-- University of Central California - Blended Learning Toolkit: See link below...
https://blended.online.ucf.edu/

What is known about the success of using hybrid courses to free up classroom space?
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<tr>
<td>1. Baepler, P., Walker, J., &amp; Driessen, M. (2014). It's not about seat time: Blending, flipping, and efficiency in active learning classrooms. <em>Computers &amp; Education</em>, 78227-236. doi:10.1016/j.compedu.2014.06.006</td>
<td>This study examines the effect of reducing the seat time of a large lecture chemistry class by two-thirds and conducting it in an active learning classroom rather than a traditional amphitheater. To account for the reduced lecture, didactic content was recorded and posted online for viewing outside of the classroom. A second experimental section, also in a blended and flipped format, was examined the following semester as a replication. To measure student subject-matter learning, we used a standardized multiple-choice exam, and to measure student perceptions of the classroom, we used a validated survey instrument. Our findings demonstrated that in an active learning classroom, student faculty contact could be reduced by two-thirds and students still outperformed aptitude-based expectations in terms of learning outcomes when compared to students in traditional classrooms; students also perceived the space to be more engaging and collaborative.</td>
<td><a href="http://resolver.ebscohost.com/openurl?sid=EBSCO3aedselp&amp;genre=article&amp;issn=03601315&amp;ISBN=&amp;volume=78&amp;issue=&amp;date=20140901&amp;page=227&amp;page=227-236&amp;title=Computers+%26+atitle=It%27s+not+about+seat+time%3a+Blending%2c+flipping%2c+and+efficiency+in+active+learning+classrooms%26aulast=Baepler%26aulast=Paul&amp;d=DOI%3a10.1016%2fj.compedu.2014.06.006&amp;site=ftf-live">http://resolver.ebscohost.com/openurl?sid=EBSCO3aedselp&amp;genre=article&amp;issn=03601315&amp;ISBN=&amp;volume=78&amp;issue=&amp;date=20140901&amp;page=227&amp;page=227-236&amp;title=Computers+%26+atitle=It%27s+not+about+seat+time%3a+Blending%2c+flipping%2c+and+efficiency+in+active+learning+classrooms%26aulast=Baepler%26aulast=Paul&amp;d=DOI%3a10.1016%2fj.compedu.2014.06.006&amp;site=ftf-live</a></td>
<td>Study is based on a single blended learning course at one institution only.</td>
<td>““Pedagogies of engagement,”... These pedagogies have many names: POGIL (process-oriented, guided-enquiry learning), peer learning, team based learning (TBL), cooperative learning, and more... the environment of a large lecture hall with fixed seating in rows makes peer collaboration difficult and awkward. A better environment for these pedagogies would be a room designed to facilitate small group work, such as an active learning classroom (ALC).” (p. 227)</td>
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thirds and students achieved learning outcomes that were at least as good, and in one comparison significantly better than, those in a traditional classroom. Concurrently, student perceptions of the learning environment were improved. This suggests that pedagogically speaking, active learning classrooms, though they seat fewer students per square foot, are actually a more efficient use of physical space.

in active learning classrooms is superior to that in traditional rooms on a host of attributes including engagement, enrichment, confidence, effective use, room/course fit, and flexibility (Brooks, 2011; Walker, Brooks, & Baepler, 2011; Whiteside, Brooks, & Walker, 2010).” (p. 228 & 229)

-- “Overall, the results of the two studies presented here show that, after controlling for demographic and aptitude-related variables, flipped, hybrid ALC-based classes can yield student-learning outcomes that are at least as good as, and in one study better than, a comparable class taught in a traditional auditorium-style classroom. An analysis by GPA quartiles showed that the effects of the move to the new format were evenly distributed across GPAs and did not
disadvantage students at any particular GPA level.” (p. 234)

-- “We reduced the total amount of time students spent in the classroom by two-thirds while lectures were shifted online. The reduced classroom time was spent in an active learning classroom where students worked with each other to solve problem sets, answer clicker questions, listen to spot explanations of key concepts, and watch short demonstrations. The students achieved learning outcomes that were in one case superior to, and in the other case statistically equal to, the outcomes from the traditional classroom when measured by a standardized exam, and their perceptions of their learning environment were improved.” (p. 235)

-- “This suggests that even with limited resources and
time, the benefits of a flipped and blended course in an ALC are still measureable and in some instances significant. This success suggests that we can extend the reach of the limited number and size of the active learning classrooms, because it matters less how much time students spend in class, and much more what they do while they are in class and what sort of classroom they are in. A classroom that was built to serve 126 students can be scheduled for the same number of hours in a semester and accommodate over 375 students. This means that more students can be exposed to these new environments and that the reach of the classrooms can extend well beyond their original design.” (p. 235)
## Trade Articles:

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<th>Limitations</th>
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| 1. Bentley University. *Hybrid classrooms are changing higher education*. Retrieved from [http://www.bentley.edu/graduate/ms-programs/mba/news-insights/hybrid-classrooms-are-changing-higher-education](http://www.bentley.edu/graduate/ms-programs/mba/news-insights/hybrid-classrooms-are-changing-higher-education) | N/A | [http://www.bentley.edu/graduate/ms-programs/mba/news-insights/hybrid-classrooms-are-changing-higher-education](http://www.bentley.edu/graduate/ms-programs/mba/news-insights/hybrid-classrooms-are-changing-higher-education) | Trade article. Not peer reviewed. | -- “Bentley has been using Saba Meeting — a remote technology provider used by 50 percent of Fortune 100 companies — since 1999 to give the classroom a modern-day overhaul. The hybrid classroom program provides in-person learning augmented by online services, allowing students to fully participate in class, no matter where they happen to be during the time block that week.”

-- “Hybrid classrooms are outfitted with video cameras, ceiling-mounted student microphones with digital processors, wireless microphones for professors and smartboards to deliver a highly effective interactive
online experience to online participants. This option gives graduate students with jobs, families, or traveling responsibilities the ability to work education into their schedules.”

-- “Bentley University studies have found that overall hybrid course effectiveness rates are no different compared to those of on-campus learning. Student evaluations of teaching have scored the same in both formats as well.”

-- “Even the students not enrolled in hybrid classroom courses are benefiting, too, as 90 percent of all students utilize the digital playbacks for learning reinforcement or to cover missed classes. The most telling part of the assessment: 98 percent of students want more hybrid classes.”
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| 4. James Madison University. (2013). *Best practices for online and hybrid courses.* Retrieved from [http://www.jmu.edu/dl/wm_library/JMU_Best_Practices_for_Online_and_Hybrid_Courses_Dec_2013.pdf](http://www.jmu.edu/dl/wm_library/JMU_Best_Practices_for_Online_and_Hybrid_Courses_Dec_2013.pdf) | N/A            | [http://www.jmu.edu/dl/wm_library/JMU_Best_Practices_for_Online_and_Hybrid_Courses_Dec_2013.pdf](http://www.jmu.edu/dl/wm_library/JMU_Best_Practices_for_Online_and_Hybrid_Courses_Dec_2013.pdf) | No literature review or research conducted. Just a list of best practices for online or hybrid learning. | “The curriculum and instruction of online and hybrid courses will be fully comparable in rigor to the same curriculum delivered on campus. The following apply: 1. Students should receive an orientation that provides information regarding how the course or program works, expectations, assignments, and any required technologies. 2. Learning objectives and course goals should be clearly stated. 3. Course requirements are clearly stated, consistent with course
objectives, and representative of the scope of the course.
4. The course content and assignments will be of sufficient rigor, depth and breadth to teach to the objectives of the course.
5. The method for determining grades is clearly specified on the syllabus.
6. Graded work is based on appropriately sequenced and instructionally diverse activities that promote the achievement of learning objectives.
7. The course instructor provides students with frequent feedback about their performance, and opportunities for instructor-student interactions.” (p. 4)

-- “Instructors should regularly evaluate learning technologies used to determine if they are pedagogically effective, and whether more effective teaching
methods could be employed.” (p. 5)

-- “decisions regarding faculty workload and compensation for online and hybrid classes should take into consideration differences in time and effort involved in delivering a high quality online or hybrid course that fosters substantial interaction among students and between faculty, versus that involved in delivering the same or a similar class in a traditional classroom format.” (p. 6)

-- “Faculty interested in developing online and hybrid courses should conduct a self-assessment regarding the following areas:
1. Competence in using the tools required to teach online.
2. An understanding of the amount of work involved in preparing and teaching an online course. 3. An
understanding of the need for regular communication with students.

4. The identification of areas where there is a need for additional theoretical or practical training in online instruction.” (p. 6)

“Students should evaluate their technological competencies and their access to required technologies prior to enrollment to confirm that they are ready to take a course offered in an online format.” (p. 7)

“Effective ways to prevent cheating and plagiarism in the online classroom include the following:

1. “Chunk” assignments over the course of a few weeks.
2. Use timed tests to mitigate the potential of Internet surfing.
3. Be proactive by...
corresponding directly with students who may be at high risk for cheating.
4. Design tests as open book tests.
5. Use technology to offset potential cheating (e.g., browser lockdown applications, etc.).” (p. 8)

-- “Faculty are expected to comply with Title 17, United States Code regarding copyright laws and the supplement Technology, Education, and Copyright Harmonization Act (TEACH Act) as it pertains to distance classes.” (p. 9)

“The Hybrid Initiative site, housed in CUNY’s Academic Commons, points instructors to a study that illustrates how to align assessment with learning outcomes in evidence-based evaluation… the study indicates that assessment should “validate the achievement of the learning outcomes” after students complete a “unit of learning” (Crespo, et al, 2010, p. 1-2).

-- “While Blackboard offers a wealth of opportunity for the mass-production of efficient web-driven courses, the system’s limited functionality constricts innovation.”

-- “Recommendation #2: Launch a competitive grant program for faculty to research integrative and innovative online and hybrid methodologies and practices… This grant
program would encourage faculty to explore online environments that are experiential in nature to revolutionize the learning experience rather than replicating traditional experiences.”

-- Recommendation #3: Include research and innovation in online and hybrid environments as part of the Performance Management Process... college presidents should also be incentivized to provide resources to faculty who have a desire to engage in innovative online and hybrid research. Since campuses are expected to increase the ratio of FTEs to online and hybrid courses, college presidents should subsequently support research in this area.”


http://www.uwex.edu/disted/conference/resource_library/proceedings/03_72.pdf

The article does not indicate the success or failure of the institutions hybrid courses.

-- The two major obstacles in getting faculty to consider teaching Hybrid courses are change and

<table>
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<th>time. Instructors are asked to change the way they teach and commit a significant amount of time and effort to the process.” (p. 2)</th>
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<tr>
<td>“A well designed, formal Hybrid Course Faculty Development Programme is the most effective and time-efficient solution for introducing faculty to hybrid teaching. The program should emphasize practical, pragmatic advice about how to design and teach hybrid courses.” (p. 2)</td>
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| Based on our experience experiences with over one hundred instructors using our Hybrid Course Program, these are Hybrid Course design errors to watch out for:
1. Avoid the “course and a half” syndrome.
Instructors tend to “add-on” to their traditional course instead of re-
thinking their course’s objectives with the hybrid model in mind.
2. Make sure you Integrate the face-to-face and online (out of class) components of the hybrid course.
3. Keep the course plans and the technology simple.” (p. 2 & 3)

-- “Suggestions to help instructors teaching a Hybrid course include:
1. Explain and justify the format of course and assignments clearly and repeatedly.
2. Make certain students understand the equivalence between the amount of work in a traditional course and hybrid course.
3. Make students aware that it is not always possible to complete all online work at home.
4. Make all assignments and other course expectations as explicit as possible right from the start.
5. Be very clear about what students are expected to do and how you will grade them.
6. Break down and phase in longer assignments.
7. Ask for feedback from students often.
8. Falling behind or sloppy record-keeping can be fatal; stay current and keep copies of everything.
9. Develop and use templates and rubrics to evaluate students’ online work.” (p. 3)

-- “The most common (student) misconceptions are that Hybrid course are easier (less work) and require less time because there are fewer class meetings. We prepare students for the hybrid courses with the following website

http://www4.uwm.edu/Ltc/hybrid/student_resources/for_me.cfm “ (p. 4)
| 8. Mangan, K. (2012). Study shows promise and challenges of ‘hybrid’ courses. *Chronicle of Higher Education*. Retrieved from [http://chronicle.com/blogswiredcampus/study-shows-promise-and-challenges-of-hybrid-courses/36350](http://chronicle.com/blogswiredcampus/study-shows-promise-and-challenges-of-hybrid-courses/36350) | s/wiredcampus/3-things-academic-leaders-believe-about-online-education/55727 | reviewed. | academic leaders who believe in the superiority of hybrid courses has hovered around one-third since at least 2012. (The U.S. Education Department expressed a similar view way back in 2010.) In fact, the slim percentage of respondents who thought hybrids were worse than face-to-face courses actually went up in 2014, from 7.9 percent to 10.6 percent.” |

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results of this study show that such worries are overblown.”

-- “Some experts advocate online classes as a way to deliver courses more economically and effectively, particularly for members of minority groups and others who might be subject to stereotypes in a classroom setting.”

-- “The authors also found that using the hybrid approach in large introductory courses “has the potential to significantly reduce instructor compensation costs in the long run.”

-- “Large public universities that face growing pressures to cut costs and improve graduation rates stand the most to gain from refining the hybrid approach, particularly for large introductory courses, the authors note.”

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"People have thought, mostly people outside of higher ed, that if we could just find the right technology, we could bring down the cost of higher education dramatically," he said. "We who live in this world see that that’s not likely to happen in the near future (Randall Bergen, 2016)"

-- ""Flipped" classes really, unless you do them in a certain way, don’t save money; they simply improve the quality of experience. One way you can use them to save money is a way most faculty members are uncomfortable with. That is, if you share lectures across classes between professors. Faculty members are uncomfortable with this because it reduces their role in the classroom."

10. Sandercock, I. (2013). Questions to consider as

https://teachonline.asu.edu/2013/05/questions-to-

Trade article, not peer reviewed.

-- “Blended [hybrid] learning inherently is
you prepare to teach your first hybrid course. TeachOnline. Retrieved from https://teachonline.asu.edu/2013/05/questions-to-consider-as-you-prepare-to-teach-your-first-hybrid-course/

Consider-as-you-prepare-to-teach-your-first-hybrid-course/

about redesigning the teaching and learning relationship. To paraphrase Marshall McLuhan, it is not enough to deliver old content in a new medium”.

“Regardless of the format, hybrid courses have several defining characteristics:
- An emphasis on active learning and problem solving
- Student ownership of own learning
- Student centered
- A focus on inquiry and dialogue
- Support from technology but not driven by it”

“No matter what the original intent, there are several important considerations to address before course development begins. As a start, consider reviewing the online resource, http://www4.uwm.edu/ltc/hybrid/faculty_resources/questions.cfm
| --- | --- | --- |
| **Benefits to Students:**  
- More opportunities to interact with course materials and resources, leading to greater engagement and enhanced opportunities for success.  
- Higher-quality peer interaction.  
- Greater flexibility in course scheduling, a boon to UW Bothell’s high percentage of working and commuting students.  
- Increased skills in self-directed learning leading to greater learner autonomy.  
- Skills in communicating effectively in multiple modes.  
- Increased technical skills. | -- “Benefits to Students:  
- More opportunities to interact with course materials and resources, leading to greater engagement and enhanced opportunities for success.  
- Higher-quality peer interaction.  
- Greater flexibility in course scheduling, a boon to UW Bothell’s high percentage of working and commuting students.  
- Increased skills in self-directed learning leading to greater learner autonomy.  
- Skills in communicating effectively in multiple modes.  
- Increased technical skills”. | -- “Benefits for Faculty:  
- Enhanced pedagogical practices as a result of redesigning the learning experience. |
- Better student engagement.
- More flexible schedule and better ability to work from different locations.
- More opportunities to participate in interdisciplinary practices (i.e., course linking).
- Better online pedagogical and technology skills while still retaining the valued face-to-face interaction with students.”

“Benefits to the University:
- Enhanced university brand and reputation with the potential of being a leader in hybrid learning.
- More efficient use of classroom space which could increase classroom availability.
- Greater student access and enhanced student learning.
- Active implementation of the 21st Century Campus Initiative's innovation and sustainability goals.”

Guidelines produced by a single institution.

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“The schedule and structure of hybrid courses can significantly vary from one class to another. This underscores the pedagogical flexibility characteristic of the hybrid model. The instructor of a hybrid course typically determines what instructional activities should be online or face-to-face depending on the learning goals, course objectives, content, and available resources.”