



# SENATE FORUM

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## On Doing It Because We Can: Linking Online Instruction to University Goals

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The very first sentence of the preface to Mary Shelly's *Frankenstein* includes a grave warning to a "Dr. Darwin," who it turns out is not the famous philosopher of evolution, but his Dad, who was doing experiments reanimating dead bodies with electricity. While the rest of her introduction carefully lays out that she isn't out to bash on any particular science, she is seeking to "preserve the truth of the elementary principles of human nature." The truth she seeks to address is hard to miss: Doing something because we can, and without a clear understanding of the full implications of it, is seriously dangerous.

The point I hope to develop here is not that online instruction is inherently good or bad, but that if we pursue it without fully considering its context and knowing what we want to accomplish we may find ourselves with more of a monster than a creation.

Are we racing forward like Dr. Frankenstein, intoxicated by possibility but blind to consequences? One of the more consistent observations that commentators make is that advocates of online education frequently advance the virtues of online instruction with little or no evidence to support their claims or with a very selective reading of the research literature.<sup>ii</sup> The Integrated Technology Strategy (ITS) of the CSU seems cut in this mold, and makes no mention of any potential shortcoming of online education, nor does it express any concern for anything other than expanded online offerings. They advance online instruction as a vehicle to promote more corporate involvement, suggest that online education might fully displace one physical campus, and assert that online instruction fosters access and "accountability."<sup>iii</sup> But does it improve the quality of instruction? The ITS cites no research.

What might the monster look like? Linda Stine, ultimately an advocate for hybrid instruction, began with this warning: "Teaching online is harder, more time consuming, less rewarding to many instructors because of the personal remove [from students], and often less fairly remunerated than teaching in a traditional environment" (p. 34).<sup>iv</sup> This is not to say that there is not a role for online instruction, but simply that we should not assume that curricula can be moved seamlessly online and used to teach mass sections of students with fewer teachers. A key point is that good online instruction is as resource-intensive as good face-to-face instruction.

This essay first explores what might be gained or lost with conversion to online curriculum, and then turns attention to how we might best plan.

## What We Stand to Lose

There is a lot at stake; here is the quick list of what we may lose if face-to-face instruction is no longer available: (1) non-cognitive learning outcomes, (2) unique benefits of face-to-face interaction that online interaction cannot replicate, (3) experiential elements of college life, (4) the depth and complexity of curriculum, (5) the impact of students who will fail in an on-line environment.

A first issue is that there is far more to college than simply the acquisition of knowledge. A common pedagogical approach is to say that learning has cognitive, affective, and behavioral components. An affective outcome is one where a student connects to the material at an emotional level; a behavioral outcome is one where students can incorporate the material into how they act. While cognitive outcomes from an online class may be equivalent to those of face-to-face instruction (research will be reviewed below), there is little reason to expect an online experience can produce equivalent behavioral and effective outcomes.

Take a quick example: It is possible to teach a public speaking class on-line, and have students Skype in their speeches. Other students can view, and the instructor can grade the speeches. But does that really prepare a student to make a speech in front of a large, live crowd? Does the change in format pose a serious threat to the acquisition of the behavior the public speaking class is seeking to provide? Probably so. It's not hard to argue that a good public speaker also needs the ability to give a speech into a camera without an audience, but that's a far cry from saying it's the only skill they need.

The second thing at risk is the unique value of face-to-face interaction. I'll bracket off another enormous body of literature, and simply say (as a guy with a Ph.D in Communication) that there are elements of face-to-face interaction that can never be simulated online. Imagine you were the parent of a teenager who had thousands of on-line friends whom he interacted with virtually on a regular basis, but no friends that he ever met face-to-face. Would you be worried? Further lost in the virtual realm is the personal

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accountability related to facing a professor and classmates regularly. For those students who fail to complete assignments and readings, online courses remove one critical tool teacher might use to motivate them.

Simply put, our students need the ability to interact with others face-to-face, both as a question of personal development and as a question of business skills. Virtually every survey of businesses that asks what skills they want college graduates to have finds “communication skills” ranked at or near the top. And they don’t mean the ability to send clever text messages; they mean the ability to get along with others in person and work together in teams.

A third thing at risk is the college experience, which includes far more than time spent in the classroom. Volumes of research (that I’ll reference without footnoting) show massive benefits to student involvement in out-of-class but campus-related activities, such as groups, clubs, events, and teams. The extent to which online “communities” can replicate these benefits is at best almost entirely unstudied, but there are lots of good reasons to be highly skeptical that it can.

Fourth, the depth and complexity of curriculum is threatened. One of the first lessons that Amazon.com found was that the length of book review articles had to be shorter on-line. While readers were willing to read multi-column Sunday Times review of books, they rarely clicked on a second web page to read the end of an article. Brevity and conciseness are good as far as they go, but the Cliff Notes version of Shakespeare is NOT the same as reading Shakespeare. Twitter, Facebook, and the various other methods of communication common to the wired-in students do facilitate quick connections, but it would be a horrendous error to adjust our curriculum to match the medium. Facebook is probably a more effective means than Moodle of getting quick classroom announcements out, but it is no substitute for the core curricula.

Fifth, it is a consistent research finding that some students do not do well in an online environment. For students who are self-motivated, who are more comfortable interacting virtually than in-person, and have the skill set to handle complex material in a virtual way, an online environment may be excellent. Students who do not fit this description may tend to flail and fail. Given the sharp increase in remedial needs for the population the CSUs serve, I think we can expect more students in the latter category than the former. Pushing those students into online sections is likely only to increase the failure rate. Furthermore, the online environment penalizes those students without consistent access to up-to-date (fast) computers with fast Internet connections. This is a line clearly drawn along socioeconomic lines.

*To assess how real these threats are, it is worth taking stock of how current online programs are doing. For-profit, on-line universities have a horrible record; dropout rates are much higher (57%) than not-for-profit equivalents, and far fewer students are able to graduate and repay their student loans.*

If we were to transform CSUF into an all on-line institution, all of these threats would be immediately realized. All of these things are lost for any student enrolled in an all on-line program. But, of course, we are not likely to be entirely online any time soon. My worry is that the faster we race toward online education the more we erode these core benefits. If, for example, 20% of our students were taking exclusively online courses and never coming to our campus, it would be a safe bet that those 20% would not be involved in campus groups, would be lagging in behavioral and affective learning outcomes, and probably lacking face-to-face communication skills.

To assess how real these threats are, it is worth taking stock of how current online programs are doing. For-profit, on-line universities have a horrible record; dropout rates are much higher (57%) than not-for-profit equivalents, and far fewer students are able to graduate and repay their student loans.<sup>v</sup> Unless we are able to completely dismiss these failures as the product of poor business practices, it is worth carefully examining the role that online instruction has played in these failure rates before we fully embrace it.

### What We Stand to Gain

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There is little doubt that some students will do better in an online venue than in a live classroom. One of the key concepts in my native field is Communication Anxiety, and there can be no doubt that some students who would never join a discussion during a face-to-face class would join an online discussion.

For some professors, online instruction may be an effective way of dealing with an ever-increasing workload (although the consensus seems to be that there is more workload on the front end to set up an online class). Such instructors may enjoy the method of instruction better and have a skill set that is best suited to online teaching. Any solution must protect the

progress these instructors have made.

Third, some content for some courses may be better delivered in an online format. If a video is an important part of a class experience, putting the video online would allow students to pause or replay portions of a video they found confusing. Doing so in a classroom would not work. There are undoubtedly other (and better) examples.

### What Just Doesn't Hold Water

A common reason advanced in favor of online instruction is increased "access," presumably for students who are unable to make it to the physical campus to take courses. Given that in the Fall of 2011 CSUF turned away 10,000 qualified students who could make it to the physical campus, it is hard to fathom that there is a need to reach out to additional students. Since there are 23 CSU campuses and each serves a distinct geographical region, it is not clear why reaching out to

more students beyond our area is a worthy goal when we already can't serve the students in our region. Unless the call for giving expanded access comes with additional funding, it simply seems that online instruction is another way we are being asked to serve more students with fewer resources.

On the other hand, there are certainly gaps in the geographic service areas of the CSU system, and a student living in San Clemente, for example, would probably not be able to get a degree without relocating. Depending on the life circumstances of the student, the online option might be the only realistic means for getting an education. However, it is worth mentioning again that teaching additional students will require additional resources, and none appear to be forthcoming.

A second claim is that brick-and-mortar costs can be saved. These savings are unlikely to be realized unless online instruction actually results in fewer buildings or campuses; any cost reduction from having a campus use 10% less classroom capacity is minimal, and likely to be at least partially offset by higher course development costs. It is worth noting that, at present, when budget cuts force reduced course offerings, the savings do not come from lower facility costs but from hiring fewer faculty.

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A third viewpoint is that online education somehow enhances “accountability,” a notoriously slippery concept. However, whatever that term might mean, employers overwhelmingly favor traditional to on-line degrees. One recent study sent out job applications with identical qualifications except that one showed an online degree and one showed a traditional degree. Of the 269 responses, 96% of employers preferred the candidate with a traditional degree.<sup>vi</sup> Employer surveys consistently report similar results; a recent Vault Inc. study showed only 4% favored online degrees. If the job of a CSU is to be accountable to future employers, and to make our graduates competitive in the workplace, we should be running from online education and not embracing it. Again, I am not arguing that online education has no place, only that accountability to the public is not a justification for it. Indeed, the first thing we are accountable for is to provide a quality education. Can we do that in an online environment?

### **What the Research Really Shows: Quality, Not Format**

A much-heralded development was the publication of a 2010 Department of Education (DOE) meta-analysis<sup>vii</sup> that concluded that online offerings were “modestly” better than face-to-face classrooms and that hybrid courses fared the best.

Few reviewers accept these conclusions uncritically. A separate meta-analysis found the results to be “spurious”<sup>viii</sup> or plagued by a list of methodological issues that made direct comparisons difficult.<sup>ix</sup> Others have commented that the DOE study does not hold for university courses.<sup>x</sup> Two

different meta-analyses and one literature review could not find either delivery method superior.<sup>xi</sup> Some subsequent research has found a contrary conclusion and produced data to show that live courses are better.<sup>xii</sup> A rather disturbing and fairly consistent finding is that some groups – notably Latinos and unprepared students – do less well in on-line environments.<sup>xiii</sup>

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A consensus seems to be emerging that the media of instructional delivery is not a crucial factor per se, but that other factors determine the success of an on-line course. The list of possible factors is fairly large. The amount of synchronous interaction, whether on-line or in person, may be crucial.<sup>xiv</sup> The extent to which on-line content is interactive and hands-on may determine learning outcomes.<sup>xv</sup> Success may require student (and presumably faculty) training,<sup>xvi</sup> and student learning characteristics or overall academic skill level may play a crucial role.<sup>xvii</sup> In a nutshell, many authors conclude that the particular methods and quality of instruction are more significant factors than the medium.<sup>xviii</sup>

### **The Resulting Double-Bind**

This brings together two points that are rarely discussed together, and almost never pointed out by advocates of on-line instruction: The typical advantage of web-based information is that it is “scalable,” that is, it can be broadcast to a large number of students, presumably with fewer instructors or with an instructor exerting less effort.<sup>xix</sup> But, on the other hand, the success of the course is largely determined by the amount of virtual interaction, which requires smaller student-to-teacher ratios. Hence, the research at this point suggests most clearly this conclusion: **Online instruction will lower the quality of instruction unless instructors provide a large amount of individualized online attention to students.**

Put in slightly different terms, we can make online education scalable, but only if we sacrifice quality. We can insure quality in online instruction, but only if we don’t make it scalable. I know of no study that demonstrates that a mass-delivered, standardized online course is capable of producing comparable learning outcomes compared to a smaller-section, face-to-face equivalent.

### **Why the Gains Threaten the Losses, Unless We Make a Plan**

Given the benefits and drawbacks, it seems apparent to me that a curriculum that is balanced is the best. It may be true that some students do better in an online environment, but those students will graduate and need to communicate in face-to-face relationships, and allowing them to graduate without ever having worked on improving those face-to-face skills would be doing them a huge disservice. An analogy to physical education is apt: Some of our students are horrible athletes, but those are probably the students who most need the PE requirement.

Which gets us to the Frankenstein question. Why does the pursuit of online instruction threaten face-to-face instruction? Given current trends, I believe we are far more likely to become too online-heavy than online-light.

### What Happens if we Pursue Scalability at the Expense of Quality?

All of the bad reasons for adopting online classes make them administratively attractive (which is not to say that administrators as people favor them, only that they make the FTES balancing act easier). It is easier to expand the size of online sections, since no physical space is required, and because grading of standardized assessments is easier to automate.<sup>xx</sup> Declining budgets make it likely there will be more pressure to virtualize anything that can be virtualized because of cost savings.

The success of online instruction in some areas will create enormous pressure to utilize online instruction where it is inappropriate. Imagine that it turns out that computer programming languages can be taught very effectively online and the ECS college was able to offer a mass-enrolled, 250-student section that featured exclusively recorded lectures and online, automatically graded exams. The final project could be programming code that a part-time person could be hired to grade on an hourly basis. The cost savings would be enormous. (I'm not saying that ECS has any such plans in the works, I'm only trying to imagine what a fully scalable and resource-saving course might look like.)

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Imagine, at the same time, that the "Interpersonal Communication" courses were entirely inappropriate for online sections since their point was to help people improve their face-to-face communication. They would require a separate instructor for every course, and probably sections of 25 people or fewer. The same might be true of theater courses, science lab sections, etc.

One obvious remedy would be to equalize resources across departments and colleges; in this example the FTES savings in ECS would be transferred to COMM. Is there a polite way to say how likely this is to happen? I think there is enormous pressure for each college to keep its own FTES savings, and without serious effort exerted in the opposite direction there can be little doubt that the most likely response would be that ECS was "taking our university into the 21<sup>st</sup> century" and the right thing to do would be for COMM (in this example) to replicate the "successes" of online instruction elsewhere.

I am not saying that any specific administrator would say this, and I am not saying that there is a lack of appreciation for the idea that some curricula is best taught in person or in small sections. But I am saying that the administrative pressure is real and is likely to trump all other concerns unless we codify an integrated policy that establishes what should and should not be done in online education.

A direct analogy to our tenure-track percentage can be made. Although all agree that it is valuable to have a large percentage of the teaching force be tenure-track faculty, unless specific targets are set and considerable effort is made to attain them, administrative factors will exert continual downward pressure on the percentage of faculty that are tenure-track. Unless specific criteria are set on the number of online courses, there will be considerable administrative pressure to expand them indefinitely.

### **What Happens if We Pursue Quality at the Expense of Scalability?**

While some might contest the conclusion offered here – that good online instruction is as time-consuming for instructors as good face-to-face instruction – there is a virtually unanimous belief that setting up an online course is more time-intensive than setting up a face-to-face course. For these reasons, there are stipends and release time offered for online course development. Presumably, the justification for this is that in the long run having online courses will be a net cost savings, although this can only be accomplished if online sections have higher SFRs or are more frequently taught by part-time-faculty (or if, as Stine warned in the opening quote of this essay, faculty are unfairly remunerated). They also require technical support.

If, however, online courses require the same effort as face-to-face courses, and they require more effort to set up, the only conclusion is that they are a more expensive way to offer courses. This can only trade off with face-to-face sections or must be funded with increased SFR (student-faculty-ratio) in the face-to-face sections. We could charge more for online courses, but this is tantamount to creating a two-tier pricing system where some students are paying more for lower class sizes (an ironic situation if they still lose out on the benefits listed in the opening section), and very much cuts into any justification based on “access.”

### **All We Have to Do Is Nothing**

This is not the place to take on the issue of whether our campus should wholeheartedly endorse corporate partnerships, embrace calls for “accountability” when there is no doubt the CSUs are doing immensely valuable work with far less support than they once received, or whether after 2,500 years of success in face-to-face instruction we wish to move to a virtual campus. But since the Chancellor’s Office sees online instruction as a key vehicle to move in these directions, now is the time to address these potential concerns **before** we move forward with more online offerings.

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## The Principles to Pursue: Keeping the Monster at Bay

Starting with the dual premises that attaining a balance between online instruction and face-to-face instruction is crucial, and that the greatest danger comes from online instruction offsetting face-to-face instruction when it is not appropriate to do so, there are some clear policy directions the CSUF campus can take to help us get to a balance.

- Codify the value of a physical campus. The advantages of a physical campus suggested here, or in a modified form following some campus discussion, should be written into the Missions and Goals, UPS documents, and perhaps even the Constitution. A task force is currently working to revise UPS 411.104; similar groups could create language for other relevant documents.
- Insure flexibility in section offerings. Given that different students succeed in different formats, where multiple sections are offered students will be best served if some sections are offered online and some sections are offered face-to-face.
- Student progress in online sections should be carefully tracked. The Office of Analytical Studies should be charged with tracking withdrawal rates, student ratings, and success rates for online sections and compare them with traditional equivalents. This data can help identify which students are most likely to succeed, which courses are best suited for online delivery, and areas in which online instruction might simply not be working.
- Place limits on the total number of online offerings. A working group should study appropriate limits on the total number of online sections offered, the total number of online units a student may count toward graduation, and the total number of entirely on-line programs.
- Retain faculty control. UPS documents should codify that course format, including the use of technology, is a decision best left in the hands of the faculty member delivering the content. Identifying the ownership of online content is a crucial issue.
- Codify in an appropriate document that online courses should not be offered for the purpose of, nor should they result in, higher student-to-faculty ratios. They should especially not be used to reduce the total number of faculty.
- If the purpose of online instruction is to grant access to students who are unable to physically reach the campus, enrollment in online sections should be limited to such students.
- It is worth considering a moratorium on new online courses or programs until our goals for online instruction are debated, settled, and codified.

## Some Best Practices Suggestions

If the quality of instruction is crucial, how best to insure it? CSU Fullerton's own Jon Taylor (Geography) wrote about online instruction a decade ago, outlining the advantages and pitfalls.<sup>xxi</sup> Two dangers Taylor observed seem especially poignant: Corporate control of curricula, and the right of faculty to "make decisions about what types of technology they used in their own course – a right normally taken for granted" (p. 19). These dangers make it unlikely that top-down mandates about course content for online instruction are the answer to improved quality. Knowledge about what factors are crucial is advancing so rapidly, and indeed the technology itself is progressing at such a rapid pace, that any centralized approach is likely doomed to failure.

Faculty are in the best position to assess what content they can best utilize, and they are in the best position to know what is working for their students.

What might be most useful is that technically adept faculty members work on an evolving “best practices” document that can guide other faculty through new methods for online courses and track the application of new technologies for instructors. On the CSUF campus the E-Learning Consortium has already started to undertake the task; the Faculty Development Center might be in a good role to facilitate and help disseminate their activities.

Although faculty have yet to work out the best methods for online instruction, there can be little doubt that teaching will be most effective when matched with student learning styles, when there is a large amount of synchronous virtual interaction among students and between students and the instructor, and when the online content is interactive and hands-on, rather than simply a collection of posted readings and videos. Of course, all this will likely require more resources, not fewer.

## Conclusion

There are benefits to be had from online instruction. As always, however, we must match our organizational goals to our policies.

Are we seeking to replace the number of buildings or campuses to save money? If so, we should put these goals into the campus master plan and add up the savings and costs. If there are net costs, we should figure out how to fund them. If there are savings, we should decide how they will be allocated. And, if we truly wish to replace physical space, we should acknowledge that we are moving into an all-online format.

Are we seeking to expand access to students outside of our geographical service area, or on its periphery or otherwise housebound? If so, we should figure out how many sections are necessary to serve such students and give them first access to online courses. Further, we should decide why we are seeking to serve such students when we have turned 10,000 students away from our physical campus and since accepting such students offers no brick-and-mortar cost savings (since such students wouldn't be attending the physical campus anyway).

Are we seeking to insure quality? If so, we should seriously consider the five benefits of a physical campus, and ask difficult questions about how those are threatened by online instruction, regardless of whether it costs or saves money.

If we simply expand online courses and programs without answering these questions we risk our final product turning out very much like Dr. Frankenstein's.

## About the Author



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