

## EvoS Online: Deep History Meets the Future

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### INTRODUCTION

The exponential growth of both online education and electronic media related to science education and evolution represents both a challenge and an opportunity for the EvoS program. Online education remains in flux in terms of perception of educational efficacy, as well as in technological standards of delivery. It is the goal of the EvoS Online project to create a central hub for the development and regulation of online course offerings operating under the rubric of the EvoS program.

The concept of distance education can be traced at least as far back as the 19<sup>th</sup> century, with the advent of postal based correspondence courses. The 19<sup>th</sup> and 20<sup>th</sup> centuries saw the entrée of various universities into correspondence learning, including the University of London and Columbia University (Moore and Kearsley, 2012). By the mid-20<sup>th</sup> century, additional media were being incorporated into distance learning programs. For example, the Open University initially relied upon radio and television broadcasts to meet its distance learning objectives (Moore and Kearsley, 2012). This was in furtherance of one of the stated goals of the Open University system, which was to expand the reach of higher education beyond the traditional university population. In this sense, the Open University is a precursor to EvoS in the goal of expanding the reach of evolutionary studies beyond the boundaries of the “Ivory Archipelago” (Wilson 2005).

### THE CURRENT STATUS OF ONLINE EDUCATION

Today, online courses and programs have expanded into virtually every type of higher learning institution. In the case of the State University of New York (SUNY) system of state learning institutions, online courses are offered through the majority

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of the systems universities and colleges. However, there is considerable variability in the availability of such online offerings between institutions, as many of the larger universities tend to function as autonomous online course hubs within the SUNY system, while the four-year colleges and community colleges offer online courses interchangeably with each other via the SUNY Learning Network (SLN). One of the reasons for this discontinuity is that SUNY institutions use a diversity of course delivery systems (Blackboard, ANGEL, Sakai) that are not cross compatible.

Perhaps the greatest obstacle to the development of online programs is one of perception. Online education is often associated with poorer quality of education among both educators and the general public. The situation has been exacerbated by the proliferation of online “diploma mills” which offer unaccredited college diplomas for very little actual work (Contreras, 2004). Another poor association with online education comes from the extensive use of the medium by various “for-profit” institutions. Even though such colleges are often accredited institutions, the for-profit education industry has come under increased scrutiny for both poor quality educational outcomes and unethical student recruitment practices (Stimpson, 2012).

Although the development of online education has expanded throughout every field of academia, Moore and Kearsley (2012) point out that the majority of distance-learning programs are not designed with traditional higher education in mind. Rather, the bulk of online learning is still geared toward adult learning and vocational education. This reflects that traditional role of distance learning, which had been geared toward vocational careers and retraining of adult’s already in the workforce.

### COLLABORATIVE ONLINE INTERNATIONAL LEARNING (COIL)

SUNY has recently created the SUNY COIL center. The concept is to give students an international experience without the expense of a study abroad. COIL courses can range widely. One extreme is to have an online course where the students are from two different countries. The other extreme is to have two separate traditional classroom courses that are different topics but share a single unit and require students to work together in teams across nations. Either way, it gives students experience working across cultures and helps them realize their own cultural biases.

Currently COIL has primarily been used for courses in the humanities. However it seems that they should play a big part in future course development in the social sciences and seems like a natural fit for much of the work in Evolutionary Studies.

At Binghamton, we are looking into the possibility of a COIL course centered around Evolutionary Religious Studies. Michael Blume, a professor of Evolutionary Religious Studies in Germany, found it interesting that he is able to reach his German students about religion by discussing it in evolutionary terms. David Sloan Wilson, a distinguished professor of Biology and Anthropology in New York, found that he was able to reach many religious students about Evolution. We have also started to put some thought into a new Evolutionary Economics course.

For EvoS at Binghamton, the challenges include not being a department, and there by not having a simple and direct path to teach new courses.

To learn more about COIL go to [coil.suny.edu](http://coil.suny.edu).

### ONLINE EDUCATION AS “DISRUPTIVE”

In considering how online education impacts traditional educational processes (and how this will impact the proposed EvoS online learning network) it is useful to consider the observations of Clayton Christensen. Commenting on the impact of online course and degree systems on higher learning, Christensen proposes that online education represents a “disruptive innovation” within the education “industry” (Christensen, Horn and Curtis, 2008). A disruptive innovation begins as a simple innovation to any traditional product or service that is initially unavailable to the majority of consumers due to rarity, high quality and high price. An innovation becomes disruptive when it becomes widely available to the majority of consumers. Disruptive innovations are then managed by either developing a new business model around the innovation or by simply plugging the disruptive innovation into an existing business model. In the latter situation, the existing model simply co-opts the innovation, and the innovation becomes a sustaining innovation. Christensen and Eyring (2011) suggest that the “disruption” of higher education by online education will need to be managed at levels above the individual institution, such as at the state level. The EvoS Online Project serves to manage the potential “disruption” both within the SUNY system as potentially at the higher level of the EvoS Consortium as a whole.

### BENEFITS OF EVOS ONLINE

The proposed online EvoS program would serve to expand the reach of EvoS even farther beyond the traditional bounds of evolutionary sciences. By offering EvoS courses in an integrated online system, students would benefit from the diverse course options. This not only serves the goals of EvoS but the traditional goals of liberal arts education.

The EvoS Online program would allow for the development of innovative course structures united by the core EvoS curriculum. Examples of the variety of credit-bearing course offerings include:

- Traditional courses offered within distance learning formats.
- Short courses (6-8 weeks) designed around a specific topic area.
- Video speaker series courses developed on the discussion around a series of recorded talks by prominent academics.
- An online internship course designed to offer EvoS credit for individual internships.

An integrated online EvoS program would draw on a diverse body of potential instructors to serve the educational needs of an equally diverse student body. Although full time faculty would be encouraged to participate in the program, it is likely that a significant proportion of the online classes to be offered through the program would be taught by adjunct instructors. Current trends in higher education suggest that adjunct instructors will make up a significant proportion of teaching faculty in any future higher learning environment (Wilson, 2013). Adjunct instructors

are typically compensated per course, often with limitations on the amount of courses they are allowed to teach. In the case of traditional classroom based courses, this has the effect of severely limiting the earning potential for adjuncts, as well as curtailing any professional development activity (research, publications, etc.).

However, the proliferation of online education opportunities has allowed for technologically conversant individuals to teach for multiple institutions. These “mercenary adjuncts” have the potential for earning a living wage as well as utilizing the online format for conducting research within their individual disciplines (via online surveys and other test protocols). EvoS Online would serve to empower adjunct instructors within the EvoS Consortium to develop their own courses based on their individual subject expertise, as well as their own professional research goals. Courses would be evaluated for content and relevance to EvoS by a peer-review system of participating faculty, and any research programs integrated into these courses would be evaluated based on ethical standards for human subject studies.

Beyond the pedagogical benefits of an expanded online curriculum, the proliferation of online course offerings provides instructors with an expanded potential subject pool for research into cognitive and psychological factors relevant to instructor research interests. Traditionally, behavioral scientists have utilized American undergraduate student populations as a testing pool for various experimental and survey based data collection. This is true of the evolutionary behavioral sciences as well, including evolutionary psychology and (to a lesser extent) human behavioral ecology. However, this research program has recently been called into question by a series of papers critiquing the utility of such subject pools. In particular, the work of Joseph Heinrich, Steven J. Heine and Ara Norenzyan has called into question the applicability of student subject pools as sources of data regarding supposed human universals. Their critique is generally centered on two basic observations. First, the subject pool for the bulk of behavioral science studies consist not only of Western (and more likely, American) individuals, but of undergraduate students derived from particular majors. According to Heinrich et al. (2010), nearly 67% of American test subjects and 80% of test subjects from European countries are derived from psychology undergraduates. Heinrich et al. have coined the acronym “WEIRD” for the societies producing such a subject pool, which stands for “Western,” “Educated,” “Industrialized,” and “Democratic.” And although psychology remains a significant outlier in terms of utilizing undergraduate subject pools, Heinrich et al. note that researchers in economics are also active in developing similar subject pools. The second observation is that data derived from such student subject pools are often used to support hypothesis regarding human behavioral universals. In other words, studies proclaiming to illustrate human universals are based on data derived from entirely WEIRD populations. This assumes that the entire range of human behavioral variation is contained within a very small subset of the human species.

Online courses can serve as data gathering avenues for behavioral research with the above criticisms of survey research in mind. Two suggestions Heinrich et al. make in their analysis regarding data collection are for behavioral scientists to seek out diverse and inconvenient populations and to encourage cross-disciplinary

research. An active and prominent EvoS Online program can address both of these issues. EvoS is a multidisciplinary program by its very nature, and participant instructors (particular those previously engaged as student members) are familiar with at least one subject area distinct from their own. Regarding the diverse student population, the potential reach of online courses beyond the traditional boundaries of college settings addresses the limited range of previous testing protocols. Naturally, this reach is limited to individuals with access to the internet, which cannot completely address the previous critique. However, online courses have the potential to reach so-called non-traditional students who fall outside the standard parameters of traditional college students. This is particularly true for courses taught via community colleges, which often serve the educational needs of non-traditional learners.

Also, in spite of the numerous areas where WEIRD populations cannot be used for assessing human cultural universals, Heinrich et al. (2010) note that several aspect of human behavior appear to be universal. This suggests that student population surveying is useful within certain contexts, provided that appropriate care be given to delineate the limits of what such data can illuminate.

### **ELECTRONIC MEDIA BEYOND THE CLASSROOM**

Beyond the scope of online education, one of the most significant online developments of the past decade has been the emergence of independent online media reflecting developments in the sciences and humanities. One such example is the scientific “blogosphere,” which has been shown to provide a vital, real-time peer-review and commentary on current events relevant to sciences and the academy. For example, the recent debate and controversy over the removal of the term “science” from the Long Range Plan of the American Anthropological Association was driven in large part by anthropology bloggers (Lende, 2010). This demonstrates the efficacy of the variety of electronic media formats available as vehicles for enhancing online education and for promoting research.

An example of an online medium developed within the rubric of EvoS is the Evolution: This View of Life (ETVOL) magazine. ETVOL magazine was founded in 2010 by Robert Kadar who, a graduate student of David Sloan Wilson. The purpose of the magazine is to bring the concept of EvoS to the general public in addition to the students and faculty at college and universities in the EvoS Consortium. ETVOL currently has 10 sections including Education, Economics, Health, Culture, Arts, Paleontology, Biology, Technology, Mind, Religion and soon Morality. Each section is updated with relevant aggregate news and reputable blogs, as well as original content.

The organizational structure of the magazine is volunteer-based. Each section has one to two editors. These editors are responsible for the original content in their section as well as editors notes to put aggregate popular science in context. Original content submissions from outside of the editorial board are forwarded to them. Based on the quality of the submission the editor may choose to publish it outright, work with the submitter, or reject the piece. They are also encouraged to interact with the comments posted on articles in their sections.

ETVOL can be used in several ways regarding the virtual classroom including watching interviews, requesting interviews, submitting original content, getting ideas for projects, and marketing. The website's YouTube channel has a growing collection of interviews with top evolutionists. These short videos can be woven into both online and traditional classroom assignments. If the specific content you are interested in isn't there, you can request interviews and submit specific questions to the managing editor.

ETVOL provides students and faculty following our magazine can see all of the latest research updates. This means that they can be debating and discussing the big discussions that are going on. Students have access to ideas and primary sources for current topics projects. The magazine can also be an effective recruiting tool for both students and instructors. As of November 2012, ETVOL had well over 20,000 twitter followers, nearly 10,000 Facebook likes, and over 80,000 YouTube video views. This illustrates the considerable reach of various social media and the potential for aggregator sites such as ETVOL to facilitate the goals of the EvoS Online Program.

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