To MOOC or not to MOOC the Liberal Arts?

Why Not Consult the Evidence?

Alexander W. Astin
University of California, Los Angeles

It’s difficult to have a coherent conversation about what have come to be known as “MOOCs” without first clarifying the manner in which these on-line courses are to be used. There appear to be at least two very different intended uses for MOOCs: to supplement and enhance traditional classroom instruction, on the one hand, and to replace or serve as an alternative to traditional classroom instruction, on the other. Since much of the current controversy concerns proposals to use the MOOC as an alternative to the traditional classroom, I will direct most of my comments to that issue.¹

MOOCs clearly represent a potentially inexpensive alternative to traditional class-based instruction for people who want to be exposed to certain types of course content. But whether MOOCs should constitute the hi-tech future of traditional undergraduate education in the liberal arts is open to serious question. I base this claim not on personal experience nor on some theoretical argument about the relative virtues of different forms of instruction, but rather on my familiarity with the empirical evidence concerning what are the key elements that contribute to a high quality undergraduate education. In this essay I will review some of this evidence and discuss its implications for the

¹ In this paper I use the acronym “MOOC” broadly to refer to any internet-based course that is intended to deliver subject matter that is equivalent to a traditional campus-based course.
Institute’s theme. It is my personal view that educators and policymakers need to familiarize themselves with this evidence if they hope to make responsible and efficacious choices concerning the future use of technology in undergraduate education.

The Evidence from Research

During the past 50 years researchers have conducted literally thousands of empirical studies of college students during the undergraduate years. These studies have looked at a wide range of student outcomes, including the acquisition of skills and knowledge, career choice, degree completion, aspirations, values, attitudes, satisfaction with college, and post-graduate life. While most of these studies have been carried out at individual colleges, a few have followed students simultaneously at hundreds of colleges and universities representing virtually all types. Multi-campus studies such as these make it possible to assess the relative effectiveness of widely varying approaches to undergraduate education. This vast literature has twice been comprehensively summarized by Pascarella and Terenzini (1991, 2005). A separate summary of the empirical evidence as it applies specifically to the undergraduate liberal arts college has been prepared by Astin (1999).

As it turns out, these reviews have repeatedly identified specific educational practices and experiences that tend to promote positive educational outcomes for students. Included among these practices and experiences are the following:

- Frequent student-faculty interaction
- Frequent student-student interaction
- Generous expenditures on student services
- Frequent interracial interaction
- Frequent use of interdisciplinary courses
- Frequent use of courses that emphasize writing
- Frequent use of narrative evaluations
- Infrequent use of multiple choice exams
- Involvement of students in independent research
- Involvement of students in faculty research
- Participation in service learning courses
- Participation in study abroad programs
- Involvement in co-curricular activities

What strikes one immediately upon reviewing this list is that, with the possible exceptions of interdisciplinary courses and independent research, the typical MOOC makes it very difficult for the student to be exposed to any of these practices or experiences. And even if the MOOC student manages to conduct independent research, who is going to mentor that student during the process and who is going to review the finished product?

A common thread that runs through many of these “good practices” is what has come to be known as student “involvement,” the process whereby students invest time and energy in activities related to the educational process. A key factor in generating a high level of involvement is exposure to the student peer group (Astin, 1993). The importance of student involvement was recognized nearly three decades ago by the Department of Education’s Study Group on the Conditions of Excellence in American Higher Education, which produced the much-cited report, Involvement in Learning (Study Group, 1984). Similarly, student involvement or
“engagement” provided the conceptual basis for the founding of the National Survey of Student Engagement (NSSE, http://nsse.iub.edu/html/about.cfm), which is now administered annually to students at several hundred higher education institutions across the country. One of the main purposes of NSSE is to encourage institutions to foster high levels of student involvement or engagement.

Decades of research on college student retention have repeatedly shown that lack of involvement is one of the main factors that leads students to drop out of college before completing a course of study. “Involvement” in this case reflects not only how much time and energy the student devotes to academic work, but also the frequency with which the students interact with each other and with faculty. (Such interactions, of course, frequently take the form of discussions of course subject matter.) It thus seems likely that the low rate of course completion that has been reported in connection with some MOOCs reflects a low level of overall student involvement that can be attributed, at least in part, to the absence of opportunities for personal interaction among fellow students and between students and faculty. Under these circumstances, it seems likely that an entire “liberal education” program consisting primarily of MOOCs would yield a very low rate of completion.

What is particularly ironic about the joint Harvard-MIT-UC Berkeley MOOC project (known as “edX”) is that the arguments that underlie the use of MOOCs in these universities appear to be highly consistent with the research evidence that I have just cited concerning the value of student-

---

2 While it is true that many MOOCs incorporate various means for encouraging student-student interaction over the net, it remains to be seen whether such indirect contact yields results that even approximate what happens during the face-to-face interaction that occurs in and outside of the campus classroom.
MOOCs are thus seen as “…automated teaching tools that can be assigned as homework to free up time for interactive discussions.” Professors are experimenting with so-called “flipped” classes, where students are asked to “watch video lectures for homework and reserving class time for interactive projects and discussions” (Young, 2014, p. A14).

Before discussing these findings any further, I need to point out that most of this paper is directed at our attempts to educate the so-called “traditional age” student, the “first-time” student who has recently completed secondary school and who intends to pursue higher education on a full-time basis. My main reason for this focus is that research on college student development has largely been done with this population. Many studies have tracked these students longitudinally through the college years and beyond. While we obviously need to conduct similar research with older and part-time students, this full-time, first-time population clearly merits our separate attention, given that it now numbers close to 1.5 million new students each fall. And even if we had access to comparable studies on these other populations, it would make little sense to lump the findings together with findings obtained from first-time, full-time students, given the many differences in the life situations and backgrounds of these two populations.

Perhaps the most relevant difference has to do maturity and socialization: Since many older students may have already embarked on careers and marriages, they may well have less interest in (and less need for) the socialization experience that is typically provided by a traditional residential liberal arts education. In any case, the reader should keep in mind that some of my conclusions regarding MOOCs and technology in general may not
apply to students who begin (or return to) college either as adults or on a part-time basis.

**What Do We Mean by a “Liberal Education”**

A fundamental issue not often addressed in discussions of technology use in higher education is the question of just what an “undergraduate liberal arts education” is. Many people seem to believe that such an education can be defined simply in terms of course credits: take such and such an array of courses in these fields, pass them, and *ipso facto*, you’ve been “liberally educated.” Under this view of undergraduate education, it didn’t much matter *how* one acquires the requisite credits or degrees: in one institution or in five, in four years or in fifteen years, as a resident or a commuter, through part-time attendance or full-time attendance, in classes of 20 students or classes of 500 students, with a lot of peer interaction or with no peer interaction at all, with a lot of faculty contact or with no faculty contact, with heavy co-curricular involvement or no such involvement. It doesn’t matter. Just collect the right credits and you’re done.

This particular view implicitly looks at undergraduate education exclusively in terms of course content: a liberally educated person is one who has been exposed to certain course content (or its equivalent as reflected in particular life experiences or competency testing). This is also the view embraced by many of those who advocate replacing traditional undergraduate education with MOOCS and other forms of distance learning. Such recommendations often come from state policy makers or politicians who worry about the escalating costs of higher education and are consequently looking for inexpensive ways of educating an expanding student population.

Of course, for working adults and some part-time students, MOOCs
represent a potentially attractive way to expose themselves to certain types of course content without the inconvenience of commuting, parking, and navigating around a large campus. Whether the quality and quantity of learning would be comparable to that of a traditional course, and whether the likelihood of course completion would be comparable, are empirical questions that need to be resolved through research.

We also need to acknowledge that for traditional-age students attending college full time, there may be some circumstances under which a MOOC can provide a relatively inexpensive alternative to the traditional class, particularly if it happens to be a large lecture class where opportunities for questions and class discussion are limited. I am thinking particularly here of courses with highly specialized subject matter, (e.g., technical material), where the conceptual, theoretical, or speculative content is at a minimum and where there is a great deal of factual information to be communicated to the student.

For most other types of courses, however, it is difficult to see how a MOOC could even begin to replicate the richness and learning potential of traditional campus-based instruction, especially in light of the research findings that I have just cited. Further, this same research suggests that an entire liberal arts curriculum consisting mainly of MOOCs would constitute a poor substitute for a traditional undergraduate liberal arts education.

I fear that there is a real danger in embracing the “course content” approach to defining a “liberal education.” One has only to visit a few college websites and read a few college mission statements to realize that an undergraduate education is intended to be about much more than simply mastering certain course content. Many institutions are thus dedicated to the development of a diversity of student outcomes that can’t be directly linked
to specific course content, qualities such as leadership, critical thinking, citizenship, honesty, social responsibility, empathy, and self-understanding. In other words, a liberal education is supposed to facilitate the development of such qualities not merely through exposure to course content, but also through personal interactions with fellow students and faculty, the residential experience, participation in student activities, and similar campus experiences.

In contrast to those who would view a liberal education narrowly in terms of course content, a growing number of educators have been calling for a more holistic or integral education, pointing to the need to connect mind and spirit and to return to the true values of liberal education—an education that examines learning and knowledge in relation to an exploration of the self and one’s responsibility to self and others. I am speaking here of developing something very close to what Howard Gardner (1999) has referred to as “Existential Intelligence.”

In debating MOOCs and related pedagogical issues related to the use of technology, as educators and citizens we need to ask ourselves: What kinds of people will our global society of the future need? It goes without saying that technical knowledge and skill are becoming increasingly important for one’s effective functioning in modern society, but technical knowledge alone will not be adequate for dealing with some of society’s most pressing problems: violence, poverty, crime, divorce, substance abuse, and the religious, national, and ethnic conflicts that continue to plague our country and our world. At root, these are problems of the “heart,” problems that call for greater self-awareness, self-understanding, equanimity, empathy, and concern for others.
Recently the Higher Education Research Institute at UCLA completed a major national study of students’ spiritual development (Astin, Astin & Lindholm, 2011), the preliminary results of which were presented at the 2010 Gaede. This study found that a traditional liberal education tends to facilitate the student’s spiritual development along a number of dimensions. Spiritual growth during the college years, in turn, was shown to enhance a number of other student outcomes, including academic performance, leadership skills, psychological well-being, and satisfaction with college. Most germane to the theme of the current Institute for the Liberal Arts, however, is that none of the specific college experiences that were found to foster spiritual growth would be likely to occur as part of a MOOC-based undergraduate education. Many of these experiences duplicate items from the list shown earlier in this paper: student-student interaction, study abroad, interracial interaction, interdisciplinary coursework, service learning and involvement in co-curricular activities. In thus seems likely that exposing students to a MOOC-based undergraduate education would deprive them of the many benefits that our study identified as being associated with spiritual development during the undergraduate years.

**Issues of Equity**

If those policy makers and politicians who are promoting MOOCs and other forms of distance learning as relatively inexpensive ways to accommodate the expected increases in student enrollment succeed in their quest, we can be sure that existing inequities in educational opportunities will be exacerbated. A considerable body of research shows that our state systems of public higher education are already highly stratified, with most flagship universities enrolling disproportionately small numbers of poor
students, African-Americans, Latinos, and other underrepresented groups (Astin, 1985). And despite decades of generous financial aid programs and affirmative action admissions programs, the numbers of poor students attending selective institutions have remained at a very low level (Astin & Oseguera, 2004). Moreover, there is evidence to suggest that in recent years increasing numbers of students from middle-income families are also being squeezed out of the most selective institutions (Astin & Oseguera, 2004).

If we attempt to accommodate a growing population of traditional-age students through the use of MOOC-driven liberal education programs, the considerable opportunity gaps that already exist in undergraduate education in the United States will almost certainly grow wider. Disproportionate numbers of poor students, first-generation students, and students from underrepresented minority groups will be denied the unique benefits that research has shown to be associated with a traditional undergraduate education.

**Conclusion**

There’s little question that MOOCs and other technological innovations have the potential to enhance the quality of the student’s experience in liberal learning. In pursuit of such a goal, we can only hope that educators and policymakers will familiarize themselves with what research has already shown us about the most effective approaches to undergraduate education. This same research evidence suggests that MOOCs and other forms of distance learning should not be employed as alternative approaches undergraduate education, especially for the 1.5 million recent secondary school graduates who begin college each fall.

Those who advocate replacing traditional approaches to liberal
learning with mass approaches to distance learning are, of course, motivated primarily by economic considerations, the desire either to conserve public funds or to profit from the widespread use of technology in higher education.

The real danger in pursuing educational reform and educational policy from a purely economic or materialistic view, however, is that we tend to forget the basic values that lead us to support the idea of a liberal arts education in the first place. The real meaning of such an education goes far beyond merely producing more physicians, teachers, scientists, technicians, lawyers, business executives and other professionals to fill slots in the labor market. A liberal education is really about encouraging the student to grapple with some of life’s most fundamental questions: What is the meaning of life? What is my purpose in life? What do I think and feel about life, death, God, religion, poverty, affluence, love, art, music, history, literature, and science? What kinds of friends and associates do I want in my life? What kinds of peer groups do I want to associate with?

In many ways the philosophy underlying the notion of a liberal education is a tribute to the power of the peer group. Students learn by interacting with each other, debating, reflecting, and discussing not only subject matter but also their personal values, beliefs, and aspirations. This form of education implicitly assumes that an excellent education is much more than a collection of course credits, one that aims to deliver on its promise to educate the “whole” student. The broad formative roles that colleges and universities continue to play in our society, combined with their long-term commitment to the ideals of liberal learning, position them well to facilitate the development of students’ intellectual and personal qualities so that they might realize their full potential and better serve their communities, our society, and the world at large.
References


