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**Awarding College Credit for MOOCs:
The Role of the American Council on Education**

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Abstract: Emerging alongside the open educational resources movement of the past decade, Massive Open Online Courses (MOOCs) have been widely heralded as advancing cause of providing increased access to higher education. The article explores the implications of the recommendation by the American Council on Education (ACE) to offer college credit for a select group of MOOC offerings, with regard to benchmarks of access and affordability, in light of recent developments in credentialing. In particular, the article examines the innovative partnership between Arizona State University's Global Freshman Academy (GFA) and MOOC provider edX, with regard to its potential to both disrupt and transform higher education by contributing to the development of accessible, affordable, alternative credentialing pathways.

Keywords: credentials; credits; college transfer students; distance education; educational innovation; educational technology; electronic learning; equal educational opportunity; influence of technology; instructional design; instructional innovation; Internet; online courses; prior learning; web-based instruction

Otorgando créditos universitarios a través de MOOCs: El papel del Consejo Americano de Educación

Resumen: Con el auge del movimiento de los recursos educativos abiertos en la pasada década, los Cursos Online Masivos Abiertos (MOOCs, por sus siglas en inglés) se han proclamado como la mayor causa del avance en el acceso y la asequibilidad de la educación superior. Este artículo analiza las implicaciones de la recomendación de la American Council on Education (ACE) de ofrecer créditos universitarios para un grupo selecto de ofertas MOOC, en relación con los puntos de referencia de acceso y asequibilidad y a la luz de los recientes progresos en la acreditación. En concreto, este artículo examina la innovadora colaboración entre la Global Freshman Academy (GFA) de la Universidad Estatal de Arizona y el proveedor edX de MOOC, con respecto a su potencial de alterar y transformar la educación superior a través de su contribución al desarrollo de vías de acreditación alternativas, accesibles y asequibles.

Palabras clave: credenciales; créditos; transferencia de estudiantes universitarios; educación a distancia; innovación educativa; tecnología educativa; aprendizaje electrónico; oportunidades educativas; influencia tecnológica; diseño instruccional; innovación en la instrucción; Internet; cursos en línea; aprendizaje previo; instrucción por Internet

Dando créditos universitários através MOOCs: O papel do Conselho Americano de Educação

Resumo: Emergindo do movimento da década previa dos recursos educativos abertos, Cursos Abertos Massivos Em-líneas (ou MOOC, seu acrônimo inglesa), tem sido anunciado como o maior avance em prover acesso à educação superior. O artigo examine as implicações da recomendação do American Council on Education (ACE) em oferecer créditos universitários para um seletto grupo de ofertas de MOOC com respeito aos benchmarks de acessibilidade e custo, e com consideração aos recentes desenvolvimentos. Em particular, o artigo examine o parceria inovadora entre o programa Global Freshman Academy (GFA) da Universidade Estatal do Arizona e edX, provedor de MOOC, com respeito à seu potencial para dismantelar assim como transformar a educação superior por contribuir no desenvolvimento de caminhos que sejam alternativos e acessíveis preços e em acceso.

Palavras chave: credenciais; créditos; Transferência de alunos da faculdade; educação a distância; inovação educacional; tecnologia educacional; aprendizagem eletrônica; igualdade de oportunidades educacionais; influência da tecnologia; inovação no ensino; Internet; cursos em-linha; aprendizagem prévia; instrução baseada no Internet

Awarding College Credit for MOOCs: The Role of the American Council on Education

In the early winter of 2013, the American Council on Education (ACE) recommended that a total of 12 massive open online courses (MOOCs), including algebra, statistics, and computer science, be evaluated by their member institutions for credit (Fain, 2013; Kolowich, 2013). The MOOC providers for these courses included two of the largest names in this nascent sector of the education industry, Coursera and Udacity. During the year prior to the ACE decision, MOOCs garnered considerable attention in education publications and journals, as well as the press at large. For example, *The New York Times* proclaimed 2012, “the year of the MOOC” (Pappano, 2012). MOOCs were characterized as disruptive in a multitude of contradictory ways: a poor substitute for a university education (Bady, 2013), an existential threat to educational institutions of all types (Sumel, 2013), a long-awaited total democratization of knowledge and credentialing (Booker, 2013).

Despite the media hype that surrounded MOOCs in 2012, the potential for MOOCs to disrupt higher education remains to be seen.

This article explores the implications of ACE's recommendation to offer college credit for a select group of MOOC offerings, and examines the potential for MOOCs to both disrupt and transform higher education by creating alternative pathways to college credit and degree completion. In light of significant developments in MOOC credentialing, including a recent credentialing partnership between Arizona State University and edX, this essay poses and seeks answers to the question: Does the ACE decision to award college credit for MOOCs matter?

MOOCs, an Anatomy

MOOCs are enormous, free, online courses that have emerged along with the open educational resources movement over the past decade. The term "MOOC," an acronym for Massive Open Online Course, was coined in 2008 by Dave Cormier and Brian Alexander during a University of Manitoba course titled *Connectivism and Connective Knowledge*, led by George Siemens, formerly of Athabasca University and currently at University of Texas at Arlington, and Stephen Downes of the National Resource Council of Canada (Parr, 2013b). The course enrolled 25 tuition-paying students, and roughly 2000 general public online learners who enrolled for free (Parr, 2013b).

Today, MOOCs typically involve large initial enrollments, often in the many thousands, with no sign-up fees or entry costs (Bates, 2014; Pappano, 2012). Open to all, the instruction takes place mostly online; however some instructors have included face-to-face components in their courses. The literature distinguishes between two types of MOOCs: cMOOCs and xMOOCs. xMOOCs are a more recent phenomenon. Both types of MOOCs are typically led by luminaries in their fields (Cheal, 2013; Pappano, 2012). The difference revolves primarily around pedagogy and instructional style. The online equivalent of large, lecture-based freshman survey courses, xMOOCs focus on the transmission of knowledge, primarily through downloadable video lectures (Caulfield, 2013). Learning in the xMOOC environment is demonstrated in much the same way as it would be in a large lecture course: students successfully complete objective quizzes and tests, contribute to discussions, complete short essays and writings, engage in structured group work, and other types of assignments that constitute major learning assessments (Bates, 2014). Some xMOOC content providers with the largest enrollments are Coursera, edX, and Udacity.

In contrast to the transmission-based learning model of xMOOCs, cMOOCs emphasize knowledge sharing among participants (Bates, 2014). In cMOOCs, learning is demonstrated by interaction with other course participants and by substantive contribution to the collective understanding of the class with regard to the subject matter. cMOOCs are less concerned with awarding credit, than with developing communities that persist and engage actively in the world (Caulfield, 2013; Parr, 2013b).

Credit for MOOCs remains rare, but about half of undergraduate students receive a digital badge or certification for completing a MOOC (Grajek, Bichsel, & Dahlstrom, 2013). MOOC completion rates vary widely, from around 5% to around 20%, depending on student enrollment intentions, such as whether they consider themselves as browsers, auditors, or motivated to earn a certificate (Parr, 2013a; Reich, 2014). It is important to note that student awareness of MOOCs is still limited; according to recent data, only about one-quarter of students are aware of MOOCs (Grajek, Bichsel, & Dahlstrom, 2013).

The ability of MOOCs to transform traditional forms and practices of education and revolutionize for-credit education is likely to revolve around credentialing (Kolowich, 2013), so the question of whether or not students receive credit for their participation in MOOCs is and should

be closely attended to by educational researchers, MOOC providers, and academic administrators (Booker, 2013). Despite the centrality of that consideration, there has been limited research that examines MOOCs within a credentialing framework.

American Council on Education, a Brief History

According to ACE president Molly Corbett Broad, ACE's assessment of non-traditional education reaches back over decades and underscores ACE's commitment to adult education (ACE, 2012). The largest of the so-called "Big 6" higher education umbrella organizations (Cook, 1998), ACE dates back to 1918 and has been instrumental in a number of policy developments over the years, including the passage of the G.I. Bill (Zook, 1950), the construction of the U.S. Department of Education ("American Council," n.d.), the founding of standardized entrance exam testing services (Zook, 1950), and the passage of the post-9/11 G.I. Bill (Hartle, 2010). Comprised of over 1,800 member institutions (ACE, n.d.a), ACE has been recommending that institutions award credit for ACE endorsed courses since 1974 (Book, 2013).

ACE CREDIT service determines recommendations for college credit in prior learning instances that include workplace experience, military training, corporate training, and other forms of non-traditional, extra-institutional learning (ACE, n.d.b; "American Council," n.d.). According to ACE, its reviews are academically sound, involving the judgment of experienced faculty (ACE, n.d.b). ACE's recommendation to offer credit for the 12 MOOCs from Coursera and Udacity was preconditioned on the requirement that students follow protocols established by the MOOC providers for verifying identity and assessment integrity (Fain, 2013; Kolowich, 2013). ACE representatives commented that their recommendation should be welcomed as advancing the causes of access and affordability (Book, 2013).

The MOOC Promise: Accessible, Affordable College Credits

ACE's recommendation to award credit for MOOCs reflects their stated commitment to advancing the causes of access and degree affordability in higher education (Book, 2013). According to Cathy A. Sandeen, vice-president of the Center for Education Attainment and Innovation at ACE, reasons for evaluating Udacity's MOOCs for credit included improving access to college and degree completion by providing multiple entry paths (ACE, 2013; Fain, 2013). Prior to ACE's announcement of its recommendation, Kristen Domonell (2013) writing for *University Business* predicted that the decision could mean "an improvement in college affordability for hundreds of thousands of students" (Domonell, 2013).

Following ACE's lead, Coursera and Udacity also framed the decision to recommend credit as having a positive impact on access to education and student's ability to pay for education toward degree completion (Funnel, 2014). However, the public relations rhetoric employed by MOOC providers has proved less stable, as may be witnessed in an examination of Coursera's website. In the press releases leading up to and immediately following ACE's decision to recommend credit for five courses on the Coursera platform, components of Coursera's mission emphasizing timely, affordable degree completion were heavily emphasized (Coursera, 2012; Kolowich, 2013). Specifically, Coursera's "About" page emphasized degree completion, defraying college costs, and displacing brick and mortar higher education. Coursera's blog post dated February 7, 2013, mentions Coursera's commitment to, "working towards a degree" (Coursera, 2013). This blog page also states, "We want to help more students enter college with credit already accrued and exit college on time, on budget and with a degree in hand" (Coursera, 2013). Two years later, Coursera's website no

longer reflects significant emphasis on access and affordability in higher education. Nevertheless, because these two causes justify ACE's recommendation, they may serve as reasonable benchmarks by which to assess the potential efficacy of ACE's recommendation.

MOOCs for Credit

A recent pilot study, funded by the Bill and Melinda Gates Foundation and administered by ACE, sought to examine the MOOC promise of accessible, affordable college credits more closely (APUS, 2013). Specifically, the study explored the potential for MOOCs reach low-income, young adult and older adult learners, and the capacity of MOOCs for integrating into traditional degree completion programs (APUS, 2013). Participants in the pilot study included many established purveyors of online, for-profit, often technical, adult degree programs, with robust and mature systems for assessing prior learning and granting credit for non-traditional educational offerings. Pilot participants—including Central Michigan University, Kaplan University, Regis University, SUNY-Empire State, University of Maryland–University College, Colorado University–Global, American Public University, and Western Carolina University—agreed to offer credit for successful completion of MOOCs recommended for credit by ACE. The pilot revealed a lack of student interest in applying for credit; specifically, the project resulted in no registered requests for MOOC credit by students in participating institutions (Negrea, 2014).

Provost John Bellum at Colorado State University–Global (CSU-G), one of the largest providers of high-quality accredited, online, public education (Mangan, 2012), conjectured that the reasons why no one had sought credit for CSU-G's MOOCs included the self-pacing, the demonstration of learning, the extra testing, and the “rigorous” process that students must undergo to receive credit for these MOOCs (Negrea, 2014). Provost Marie Cini at University of Maryland–University College, a peer institution to CSU-G and an acknowledged leader in both prior learning assessment and in adult education degree completion (Mangan, 2012), observed, “It's just a lot easier to take a class somewhere and pay for it than to go through all this” (Negrea, 2014). Cini's remarks suggest that the rigorous processes entailed in obtaining credit for MOOCs may have effectively eliminated accessibility for many students.

To obtain credit for CSU-G's UPCEA pilot Udacity MOOC, “Introduction to Computer Science,” interested students would have needed to pay \$350 per credit, plus \$89 to sit for a final exam proctored by Udacity (Negrea, 2014). The price of MOOC credits among the UPCEA consortium members varies widely. In contrast to CSU-G, American Public University's standard tuition rate for general education is \$270 per credit. To improve college credit affordability, some institutions have offered a discounted tuition rate for credits earned in MOOCs; for instance, in 2014, the first MOOC Pennsylvania State made available for credit, an undergraduate criminology MOOC, was offered at a discounted tuition rate of \$333 per credit, reduced from \$691 per credit.

The University of Oklahoma (OU) recently announced plans to open a wide range of its accredited online learning courses to the general public from all over the world at no cost or credit, while continuing to offer those courses for credit to enrolled students (Schaffhauser, 2014). OU's online model, while reminiscent of the original 2008 “MOOC” offered by Siemens and Downes through the University of Manitoba (Parr, 2013b), may best be described as “flipping the MOOC” (Schaffhauser, 2014). In effect, OU's “flip” offers credit for MOOCs to OU students, while considerably widening the scope of their potential real-time course interactions. In one popular OU organic chemistry course, *The Chemistry of Beer*, 9,000 students enrolled globally, along with several hundred OU students (Schaffhauser, 2014). However, with a nonresident tuition rate of over \$500

per credit hour, affordable enrollment for credit in OU MOOCs may be limited to Oklahoma residents for whom tuition is significantly discounted.

Thomas Pack, writing for *Information Today* (2013), notes that Coursera's partners include some of the most prestigious institutions in America: Stanford, Brown, Columbia, Duke, Emory, Johns Hopkins, Princeton, Rice, among others. Significantly, none of those institutions has announced plans to offer college credits for MOOC learning. In fact, one of edX's founding partner institutions, Cornell University, recently released a faculty committee report that questions Cornell's involvement in future MOOC ventures and explicitly rules against Cornell awarding credit for MOOC courses taught by Cornell faculty (Cornell University, 2014). Clearly, if students are to receive college credit for participation in MOOCs, that credit will be awarded at institutions more receptive to this emerging alternative credentialing system.

Arizona State University, a New Partnership with edX

Arizona State University (ASU) recently announced a campaign to award college credit to MOOC enrollees in their Global Freshman Academy (Straumsheim, 2015). In this endeavor, ASU will partner with the Harvard/MIT MOOC provider, edX (Chung, 2015). Unlike Coursera and Udacity, which are private, for-profit corporations (Shumski, 2013), edX is managed as a non-profit academic entity, with the stated goal of "expanding access to education for everyone" (edX, n.d.).

ASU's promotion of MOOCs through its Global Freshman Academy (GFA) pilot program is a major development in MOOC credentialing because ASU has an excellent reputation, nationally and internationally. An acknowledged leader in online degree programs (Best online, 2015), ASU is also respected for the high quality graduates they produce, having ranked fifth nationally for adequate graduate preparation for the workforce in a 2010 report by *The Wall Street Journal* (Evans, 2010). With the largest enrollment of any public university in the United States (Snider, 2014), ASU proposes to award college credit for at least a dozen (Chung, 2015).

In a departure from standard administrative protocol, ASU's GFA students will not need to petition for the credit until after they have completed the MOOC (Anderson, 2015). Prior to ASU's GFA pilot, students who wanted to earn credit for one of the ACE endorsed MOOCs would need to sign-up for the course, declare their intention to seek credit, make an initial payment to the MOOC provider, and successfully complete all of the course requirements on time, with a passing grade. Students would then go to a nationally certified testing center and pay around \$100 to take a comprehensive final exam. The teaching team would grade that exam and decide if the student should get a signature track, endorsed for credit, certificate of completion. The student would then take that MOOC certificate to a Registrar or Department Head and apply for credit. ASU's GFA turns that model on its head (Straumsheim, 2015).

Under ASU's new model, students need only an email address and a name to sign-up for the class. Students will simply declare that they are likely to pursue credit at the end of the course, complete all assignments in an identity-verified manner, complete the course and decide if they would like credit, then petition ASU to receive the credit. ASU then awards credit at a significantly discounted rate: less than \$200/credit hour, even to international and/or out-of-state students (Chung, 2015). Because all of the faculty, curriculum, teaching assistants, content, and identity verification are all produced and/or controlled by ASU, these new MOOCs will be available for credit without the approval of the American Council of Education. Additionally, because ASU has been offering all of these courses online in fully regionally accredited online programs, ASU is able to provide fully transportable college credit for these courses, which likely will be recognized by other institutions, nationally and internationally.

While ASU's GFA affiliation with edX has been hailed by *The Washington Post* as "groundbreaking" (Anderson, 2015), many questions persist. Which students will petition ASU for credit? Will other institutions accept those credits? How will the partnership between edX and ASU impact credentialing of learning in MOOCs? At this point, it is too early to know, but if ASU's Global Freshman Academy is successful at awarding discounted college courses to large populations of learners, the disruptive and potentially transformative effects of this development will likely be subtle at first and possibly pronounced in years and decades to come.

Furthermore, while ASU appears to be on a solid footing, leading with courses titled Astronomy, Western Civilization, and Human Origins, that footing may be tested this academic year when the GFA rolls out an English Composition MOOC as a component of the pilot program. Writing intensive courses like composition and philosophy are more difficult to teach successfully online; English Composition has proven to be an especially tough subject to teach in the MOOC format (Head, 2013). ASU has committed to ensure that all work submitted through the MOOCs is evaluated by ASU faculty or teaching assistants (Straumsheim, 2015).

Predictably, ASU's GFA pilot announcement provoked accreditation concerns from critics. Researcher and cMOOC pioneer at the University of Texas at Arlington, George Siemens, dismissed the controversy in terms that normalized the pilot program: "This is what has in the past been called 'distance education' or 'online learning'. . . Nothing new here, folks, move along" (Straumsheim, 2015). While Siemens correctly describes the ASU pilot, there is nevertheless some nuance that his description seems to miss: ASU's credentialing procedure effectively adopts the online courses offered on the MOOC platform for ASU credit. The credit on the ASU transcript will not have any indicators describing it as MOOC credit or even as online credit. Department Heads and Registrars alike will have no way of distinguishing the credit on the transcript as MOOC credit; it will appear identical to that obtained on the ASU campus. Furthermore, when those credits come from ASU, Department Heads and Registrars will be evaluating a transcript from a prestigious, recognized leader in education, rather than assessing credits from a MOOC provider endorsed by ACE. Such credit equivalency and prestige renders ASU's program a potential watershed with regard to students' ability to earn credit for learning happening in a MOOC.

Perhaps the most significant aspect of the ASU GFA pilot is that it effectively sets a ceiling for what first-year courses should cost. The fact that ASU has declared a market-based tuition ceiling for freshman education could be a significant factor in changing financial outlooks across higher education, particularly at community and technical colleges, and also at four-year comprehensives that depend upon freshmen enrollment fees to pay for their technical and/or graduate programs. Guaranteeing the tuition at under \$200 per credit is a potentially effective marketing strategy, as price-conscious students will likely turn away from options like the University of Phoenix, which would cost them thousands of dollars for a single online course, in favor of ASU's GFA, where they can earn more transportable credits from a respected brick and mortar institution. The sector of for-profit, Internet-based, online education providers will be most disrupted by ASU's announcement, as will institutions competing for the demographic of students that typically embraces online classes—including adult, non-traditional students who are returning to school and trying to balance work, family, and career. This educational demographic is sizable. According to the most recent "Online Report Card", an annual report that tracks online education in the United States, at least 28%, or more than one out of every four students took at least one online course in 2015 (Allen & Seaman, 2016).

Does the ACE Decision to Award College Credit for MOOCs Matter?

Using ASU as a case in point, one is left questioning: Does the ACE decision to award college credit for MOOCs matter? The ASU GFA pilot announcement indicates that the questions regarding the credentialing of MOOCs will be decided on college campuses, rather than within educational content providers like Coursera and Udacity—a shift that reduces the significance of ACE’s recommendation. ASU’s important test case for MOOC credentialing could signal the beginning of a much-anticipated transformation of the traditional forms and practices of higher education. Only time will tell.

Meanwhile, in the wake of ACE’s decision, unrealistic expectations regarding MOOCs have been assuaged. ACE’s decision may have mainstreamed MOOCs sufficiently, and with such little observable impact that, by this time, it is evident that MOOCs will not result in an immediate or massive dislocation of the entire higher education industry. ACE’s decision invites researchers and practitioners to conceptualize and discuss MOOCs in realistic terms, and attempt to use them instrumentally to improve accessibility and affordability in higher education, toward increasing student success and thereby accomplishing long-standing institutional goals.

While it could be argued that the ACE recommendation to award credit was not significant in terms of the actual number of credit hours it produced (at least to date), the credit recommendation was indeed significant insofar as it sent a message to the ACE affiliate institutions, to private industry, and to society at large that the type of online learning being offered for free by MOOCs is similar to the type of online learning that colleges and universities, both private and public, for profit and not-for-profit alike, are currently providing for a premium.

Prominent results of the ACE recommendation to date include several partial degree programs, a fully online master’s program at Georgia Tech, and now ASU’s innovative Global Freshman Academy. In addition, each of the three major MOOC providers, although non-accredited, recently introduced its own independent credentials for paid courses: the Udacity Nanodegree, the Coursera Specialization, and the edX Xseries (Shah, 2014).

Researchers and practitioners alike must begin to attend to the kinds of online learning happening in MOOCs. Students, parents, advisors, high school counselors and employers should become more aware of the transportability of credits and the availability of more flexible, less rigid pathways to degree completion. Those realities are part of the world of higher education today. ACE’s recommendations, MOOC credentialing, and ASU’s bold experiment will likely shape how those realities unfold in the future and should be closely attended to by policy makers, faculty, and administration.

Conclusion

This essay has sought answers to the question: Does the ACE decision to award college credit for MOOCs matter? Clearly, the ACE recommendation moved MOOCs closer to academic acceptance. However, the absence of student enrollment for credits billed as both accessible and affordable, and the reluctance of some institutions to award credit for MOOCs, signal that MOOCs have not yet become an effective or often used mechanism for providing college credit.

In light of the innovative, streamlined credentialing processes and price ceilings involved in the recent ASU GFA pilot partnership with edX, the impact of the ACE decision may be seen retrospectively as having opened the way for a gradual yet radically transformative disruption of higher education policy and practice. Ultimately, greater access and affordability may result from these and other innovative credentialing models.

While relatively little is known to date about the learning happening in MOOCs, additional study is necessary to determine whether and in what ways MOOCs may be a viable learning platform for different student groups (Siemens, Irvine, & Code, 2013). Furthermore, an examination of policies and processes that determine the cost, accessibility, and transportability of earned credits is needed in order to understand the potential for MOOCs to serve as alternative credentialing pathways, and the implications of those pathways for student learning.

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