

What a Liberal Arts and Sciences Education is...and is Not

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Preface to 2014 version of *What a Liberal Arts and Sciences Education is...and is Not*¹

The following article is a revised and updated version of a piece I wrote more than a decade ago entitled ‘What a Liberal Arts Education is ...and is Not.’ That article was written when experiments in liberal arts and sciences education in central and Eastern Europe were in their infancy. The article reflected experiences that emerged during the context of the creation of Smolny College, a partnership between Bard College, a hundred and fifty year-old residential liberal arts college in upstate New York, and St. Petersburg State University, one of Russia’s oldest and most respected universities. Since then much has changed. Smolny has moved from a program within the Philology Faculty of SpBU to becoming Russia’s first Faculty of Liberal Arts and Sciences. Several Russian universities, from tiny arts institutions to federal research institutions, have expressed interest in developing liberal arts education. Bard College has set up new partnerships in the Kyrgyz Republic, Palestine, and Germany, and is exploring new programs in China and South Africa. Meanwhile, liberal arts education is blossoming in several places in Europe, particularly in the Netherlands, where several institutions have distinguished themselves.

In the decade since the first time the article appeared, the environment has changed and lessons have been learned. While the structure and the essence of the argument in this article remain largely the same, there are some notable changes, starting with the title, which now refers to liberal arts *and sciences* to make clear from the start that natural sciences and mathematics form a part of the system of liberal arts education discussed here. I am certain that a decade from now, with advances in technology, MOOCs, and the like, that there will be further changes, but in spite of this, the basic tenets of a liberal arts and sciences education will remain the same.

Introduction

In recent years, higher education leaders across the globe have been confronted with a series of challenges, from cost, to the emergence of new technologies and Massive Open Online Courses (MOOCs), to a greater focus on direct links between university education and employment outcomes. In searching for new approaches, many educators, especially those who are embedded in European/Humboldtian traditions, are turning back the clock by beginning experiments in (re-) introducing liberal arts and sciences education.

In central and eastern Europe and the former Soviet Union, where this author was based for several years and has worked for more than two decades, liberal arts and sciences (“LAS”) education first drew interest because academics saw it as an antidote to the Marxist-Leninist ideology that permeated the teaching process in Soviet times. It was often linked to the notion of enhancing citizens’ agency in the wake of the collapse of authoritarian regimes. Many also saw LAS education as a means of introducing interdisciplinary curricular approaches and thus as a remedy to the disciplinary rigidity that dominated higher education in the region. Some were enthusiastic about bringing the arts, which had been consigned to conservatories and specialty schools, into university curriculums. Still others were attracted to new student-centered pedagogical approaches. With the passage of time, interest in LAS education in the post-Communist world has come to reflect similar sentiments of educators in other parts of the world with different histories and traditions: whether in Europe, Asia, Latin America or Africa, university faculty and administrators are increasingly looking

¹ The article is a modification of a talk of the same title given at the Open Society Institute’s UEP Alumni Conference in Budapest Hungary, June 2003.

to introduce and adapt liberal models of higher education to their own environments.² For some it is a response to new structures: in Europe the distinction between the baccalaureate and master's degree that is a product of the Bologna process left the opportunity to allow students to experiment more before specializing.³ For others, LAS education is about competition in the educational marketplace: educators recognize the limits of old teaching methods, particularly in light of competition from Massive Open Online Courses (MOOCs). Still others view it as an issue of modernization: with an ever-changing economy, and diminishing prospects for graduates having lifetime employment in one narrow specialty, today's students need to be good learners, flexible and adaptable thinkers, and prepared to move beyond the rigid boundaries that are the product of hyper-specialization and traditional disciplinary approaches. The visual of Steve Jobs (who briefly attended Reed College) introducing the iPad as emerging from the intersection of two streets named 'liberal arts' and 'technology' has replaced that of an undergraduate sitting studiously with an Oxford don.

Adapting the LAS to new educational environments has not always proved a simple task. Reformers are often more eager than knowledgeable. They are sometimes assisted by 'experts' from abroad who are unfamiliar with domestic conditions and who focus more on lofty goals than institution-building. At too many conferences and workshops I have attended in Eastern Europe, I have seen the glazed eyes of educational reformers from the region as they listen to Americans offer sweeping generalizations about LAS education and/or prescriptions divorced from participants' reality. When the best that we can offer are soaring images and a paraphrase from Justice Potter Stewart's famous dictum on obscenity--you 'know it' when you 'see it'--we fail as educators and increase the likelihood of misinterpretations, unreflective applications and, ultimately, dead ends. It is our duty as critical thinkers and educators to move beyond generalizations and sift out what is essential to a LAS education. In this way we can move towards context-sensitive adaptations without sacrificing that which is essential.

My goal in this essay is a very practical one: to provide a definition of a modern LAS education that will assist those involved in developing LAS institutions. I hope to articulate how, in a very practical way, LAS education works in higher educational institutions, particularly in the classroom.

This task is not simply an intellectual exercise. In the past sixteen years, colleagues at Bard College and I have been involved in a project with St. Petersburg State University in Russia to create Smolny College, Russia's first accredited LAS institution, which is now the Faculty of Liberal Arts and Sciences at St. Petersburg State University. We have also been involved, to a greater or lesser extent, in other projects in Russia, where Smolny's accreditation by the Ministry of Education has created a precedent for the spread of the LAS, as well as in Germany, the Kyrgyz Republic, Palestine, South Africa and China. While much that is presented here might seem obvious to those who are steeped

² See Susan Gillespie, 'Opening Minds: The International Liberal Education Movement,' *World Policy Journal*, Winter 2001/2002, pp. 79-89 and Patti McGill Peterson, 'A Global Framework: Liberal Education in the Undergraduate Curriculum,' in Patti McGill Peterson, editor, *Confronting Challenges to the Liberal Arts Curriculum*, New York: Routledge, 2012, pp. 1-23. Paradoxically, interest has grown worldwide as LAS education is often under attack in the United States. LAS education has been derided as elitist and dismissed as outmoded and 'in trouble.' Even its advocates speak of a need for 'revitalization' and 'restructuring.' W.R. Conner, 'Liberal Arts Education in the Twenty-First Century,' AALE Occasional Paper # 2, 25 May 1998, www.aale.org/conner.htm. Carol M. Barker, Liberal Arts Education for a Global Society, Carnegie Corporation of New York, 2002, www.carnegie.org, p. 9; Stanley Katz, 'Restructuring for the Twenty-First Century,' in Nicholas H. Farnham and Adam Yarmolinsky eds., *Rethinking Liberal Education*, New York: Oxford University Press, 1996, pp. 77-90.

³ See Marijk van der Wende, 'Trends towards Global Excellence in Undergraduate Education: Taking the Liberal Arts Experience into the 21st Century,' *International Journal of Chinese Education*, vol. 2, 2013, pp. 289-307.

in contemporary LAS traditions, particularly in the United States, where it has had the most resonance, each issue addressed has surfaced at some point as a real-world concern. One area that I focus on in particular, which is often overlooked, is what I call the nexus of administration, curriculum and pedagogy: the infrastructure that makes a LAS education possible. By articulating clearly how LAS systems work and dismissing misconceptions about LAS education, we can inform potential reformers more clearly of the nature of the project they may wish to embark upon and the pitfalls they might face. The LAS is not an easy system to understand and can be challenging to adapt. People should know where they are sailing before leaving port.

It is important to note that the process is not a one-way street: there is a significant degree of reciprocity of learning when one goes through the process of examining different traditions and adapting a familiar system in a new environment. By deconstructing the LAS and building it from the ground up, by engaging with others who adapt and reimagine old approaches, we refine our thinking about our own educational system and learn of shortcomings as well as potential opportunities for change.

The essay relies much on the work of Philippe C. Schmitter and Terry Lynn Karl whose essay, ‘What Democracy is... and is Not,’ which explores an even more timeworn and elusive concept.⁴ In adapting Schmitter and Karl’s approach, I will attempt to define the essential characteristics and concepts that distinguish LAS as a unique system of education, the procedures, rules and arrangements that create an enabling environment necessary for a LAS system to succeed, and highlight common misinterpretations and erroneous conclusions about LAS education.

DEFINITION

In order to clarify what we mean by LAS education, we should start with a definition. The following definition focuses on the goals of liberal learning, an issue about which there is general consensus, as well as the means for obtaining these goals, something that is less frequently discussed at length.

Modern liberal arts and sciences education is a system of higher education designed to foster in students the desire and capacity to learn, think critically, and communicate proficiently, and to prepare them to function as engaged citizens. It is distinguished by a flexible curriculum that demands breadth as well as depth of study, encourages inter-disciplinarity, and enables student choice. It is realized through a student-centered pedagogy that is interactive and requires students to engage directly with texts within and outside of the classroom.

There are a number of points that should be made about this definition. **First**, it is important to emphasize that we are looking at a ‘system’ of education, by which I mean ‘an ensemble of patterns’ that determine the educational process, including the curriculum and pedagogy.⁵ In order to work properly, the ensemble must be ‘institutionalized,’ which is to say ‘habitually known, practiced and accepted by most, if not all’ of the relevant actors, including faculty, students, administrators, governing bodies and accreditors.⁶ In other words, the vast majority of participants in a system of LAS education necessarily must be knowledgeable of, and willing to conform to, the expectations

⁴ Philippe C. Schmitter and Terry Lynn Karl, ‘What Democracy is... and is Not,’ *Journal of Democracy*, vol. 2, no. 3, Summer 1991, pp. 75-88.

⁵ Schmitter and Karl, ‘What Democracy is...,’ p. 76.

⁶ Schmitter and Karl, ‘What Democracy is...,’ p. 76.

and requirements of that system. This notion of a system differs from the use of ‘liberal arts’ exclusively as collection of subjects to be studied, be it the classical *trivium* (grammar, logic and rhetoric) and *quadrivium* (arithmetic, geometry, music, and astronomy), or the more contemporary association with arts and humanities. It may be true that a modern LAS education can include all of these subjects (arts, humanities, social sciences and natural sciences, as opposed to pre-professional education), but as a system it not only includes subjects, but curricular structures, specified processes that allow for things like student choice, interdisciplinary study and teaching approaches that democratize learning.

Second, I explicitly use the term ‘LAS’ education as opposed to ‘liberal’ education. While the two notions share similar goals and are often used interchangeably, in my view ‘LAS’ education *as a system* is a more comprehensive package. For example, a teacher can reflect liberal educational pedagogy by using interactive teaching methods, but she might be isolated within her institution and constrained by a narrowly defined highly specialized and inflexible curriculum. Similarly, a curriculum can allow for some student choice of area of specialty, but that area might be limited to humanities or social sciences. I view the approaches and practices associated with term ‘liberal education’ (interactive teaching, close reading of texts, flexible curriculum that emphasizes breadth as well as depth) as the building blocks of the LAS system. While these building blocks might be beneficial in and of themselves, isolated from other components they may be insufficient to constitute a system of LAS education.⁷

Third, in this paper I use the term ‘liberal arts *and sciences*’ intentionally: while in recent times ‘liberal arts’ curriculums are most often associated with literature and the humanities, natural sciences and mathematics historically have formed part of the LAS curriculum and are critically linked to some of the most important challenges facing citizens today, be they related to disease, nutrition, or the environment. If students are to participate in important decisions confronting contemporary society then they must be numerate to understand quantitative social sciences and modern scientific concepts. As Shirley Tilghman, former president of Princeton, pointed out, liberal arts colleges and universities have two distinct and critical missions in the sphere of the natural sciences: to educate scientifically literate citizens and to create a new generation of scientists.⁸ Assumptions about the sciences also belie a prejudice that assumes that the sciences employ pedagogies utterly distinct from those employed elsewhere in the university and which are devoid of student-centered approaches. As will be addressed below, this is not the case: innovative, student-centered science teaching engages students early in their academic careers and promotes strong learning outcomes.

Fourth, I specifically modify the term ‘LAS’ with the word ‘modern’ in order to underline my focus on contemporary practices. There is a long history of liberal arts education and some institutions take pride in their traditional ways. For example, St. John’s College, which has branches in

⁷ **The American Association of Colleges and Universities defines liberal education as** ‘an approach to college learning that empowers individuals and prepares them to deal with complexity, diversity, and change. This approach emphasizes broad knowledge of the wider world (e.g., science, culture, and society) as well as in-depth achievement in a specific field of interest. It helps students develop a sense of social responsibility; strong intellectual and practical skills that span all major fields of study, such as communication, analytical, and problem-solving skills; and the demonstrated ability to apply knowledge and skills in real-world settings.’ See <https://www.aacu.org/leap/what-is-a-liberal-education>, downloaded September 29, 2014.

⁸ See van der Wende, ‘Trends towards Global Excellence in Undergraduate Education,’ pp. 289-307. Shirley M. Tilghman, ‘The Future of Science Education in the Liberal Arts College,’ January, 2010, <http://www.princeton.edu/president/tilghman/speeches/20100105/>

Annapolis, Maryland and Santa Fe, New Mexico, maintains a distinctive ‘great books curriculum’ throughout its students’ four years of study, harking back to the origins of liberal arts education in Europe and the United States. There is much that is of value in this approach, but it is important to stress that this is neither modern nor the norm, and thus falls outside of the definition offered here.⁹

Finally, I use the phrase ‘higher education institutions’ to avoid confusion associated with the terms college and university. While in the United States the terms are used interchangeably, that is not the case in Europe and many other parts of the world, where the term college is associated with secondary education or technical training. Many observers do not recognize that at many of the most prestigious research universities in the US, undergraduates study in what are termed undergraduate colleges, be it Harvard College, Yale College or Columbia College. Moreover residential liberal arts colleges, like Amherst College, Swarthmore College, and William College, are considered amongst the best places for undergraduates to study, in spite of the fact that they do not appear in most of the world rankings that many educators and government officials in the BRIC countries and elsewhere often obsess over. The reality is that LAS education comes in many different structures, be it the residential liberal arts college in the US, the ‘university college’ in Europe, the Honors College in major US state universities, or in the curriculums of research universities that regularly appear at the top of international rankings.

Let us now return to the substance of LAS education in more detail.

Goals

The first part of our definition speaks of goals. *The central tenet of LAS education is that it is more concerned with the development of the individual than the preparation of the student for a specific vocation.* Harking back to its Greek origins, it is concerned with shaping citizens who are capable of being active participants in democratic society. In modern times, it goes beyond this to prepare students to function in dynamic social and economic environments. The LAS wager is that love of learning, capacity for critical thinking, and ability to communicate effectively are, in the course of their lives, more valuable to students than depth of knowledge in one subject. These qualities are particularly important in allowing graduates to adapt to changing social and economic conditions and to help them to continue to grow, learn, and adapt to changing conditions long after they have left the halls of academe.

Curriculum

The second part of the definition, which focuses on curriculum and pedagogy, is equally important and more critical to the international context in which LAS education now finds itself. It is one thing to speak of lofty goals; it is another to clarify the real-life circumstances that allow institutions to pursue such goals.

In terms of curriculum the first important characteristic of a LAS system is *student choice*. Student choice comes in two important forms: the curriculum is sufficiently flexible that students have substantial leeway to *choose courses* that they will take, and it offers students the possibility to *choose an area of academic concentration* (often called a ‘major’) after they have entered a higher educational institution. The very fact that students play a significant role in shaping their program of study is

⁹ For further information on St. John’s see <http://www.sjca.edu>.

critical to the democratization of the educational process. Symbolically, it confirms that there is not a single path or a master plan to higher learning. Perhaps more importantly, the engagement of young adults in making critical educational choices prepares them for important decisions they will make later in life. Moreover, allowing students the flexibility to choose their area(s) of academic concentration after they have entered college/university underlines LAS' belief in the capacity of people for growth and change, its emphasis on continuous learning, and its stress on the importance of critical thinking, as opposed to the accumulation of knowledge. As such, the LAS approach strongly contrasts with classical continental European systems (West and East), adapted throughout the world, where students enter faculties/departments that are autonomous and operate effectively as mini-universities: students enter the faculty of law, history, or engineering and never leave that faculty for their four or five years of study. The classical European system not only presupposes that students are certain of their main educational foci upon entrance to college/university, but it narrows their breadth of study once they have entered a higher educational institution.

The emphasis on student choice in LAS education does not mean that anything is permitted (a source of great disappointment for many undergraduates who take the term 'liberal' in liberal arts and sciences too literally). The educational process in a LAS system is governed by what can be called '*bounded uncertainty*'.¹⁰ As our definition indicates, modern LAS education is supported by a curriculum designed to promote breadth as well as depth.

Breadth of study is often ensured through requirements that students take a certain number of mandatory courses (often referred to as the 'general education requirements' or the 'core curriculum') that are designed to ensure that all students are exposed to classics and/or important modes of inquiry and approaches to knowledge.¹¹ Breadth can also be ensured through so-called 'distribution requirements,' which oblige students to take courses in different groupings of disciplines, but without necessarily specifying which courses are required.¹²

These requirements are the subject of continual debate at most institutions (Bard, for example, is now undergoing one of its regular curricular reviews). Three important points should be raised here. First, to meet the LAS standard there must be some structure that requires students to have curricular breadth. If breadth of study is optional, then the system's goals are critically undermined. Second, in the modern version of LAS education, curricular requirements should go beyond arts and humanities and extend to mathematics and the natural sciences. As stated above, this is essential in order for students to be engaged with some of the most important challenges facing today's citizens. Finally, the number of requirements cannot be so great as to preclude student choice, the importance of which was discussed above.

As far as depth is concerned, modern curriculums regularly require students to follow or design (together with faculty) a program of concentration or a major, the requirements of which must be clearly articulated and transparent. Academic programs may require students to take a certain number of courses in a given subject area, may specify certain mandatory courses, and may require or recommend a specific sequence of courses. They also may require or recommend courses in

¹⁰ Schmitter and Karl, 'What Democracy is...', p. 82.

¹¹ See for example University of Chicago, <http://collegecatalog.uchicago.edu/thecollege/thecurriculum/> or Columbia University, <http://www.college.columbia.edu/core/core>. (Downloaded September 10, 2015).

¹² For example, my institution currently requires students to take classes in nine areas: Analysis of Arts; Foreign Language, Literature, and Culture; History; Humanities; Laboratory Science; Literature in English; Mathematics and Computing; Practicing Arts; and Social Science. All courses are classified according to the requirements that they fulfill.

related areas. The overall goal is to ensure that graduates have a minimum proficiency in at least one coherent intellectual sphere (sometimes students focus on more than one area). It should also be stressed that concentrations or majors are not limited to traditional academic disciplines. LAS institutions have been particularly strong at developing interdisciplinary programs that have supplemented and in some cases supplanted age-old approaches while maintaining intellectual integrity. Environmental studies, cognitive studies, public health, and human rights are all examples of subjects that address some of the most poignant challenges facing humanity and which require inter-disciplinary approaches.

One note of caution is important to mention here: there is always going to be a tension between breadth and depth of curriculum. One tendency, particularly in institutions which operate in a milieu in which the continental European model dominates, is to over-plan concentrations/majors, which is to say to make majors so demanding that they emulate pre-existing structures in terms of requirements. This risks imperiling the breadth element of LAS education. Ideally, student choice should not be limited to the breadth requirements outlined above but should be possible viable, within reason, throughout a student's education.

Teaching

The other critical component of our definition of modern LAS education is pedagogy.¹³ As Vartan Gregorian has argued, 'At the heart of liberal education is the act of teaching.'¹⁴ Teachers sharpen their students' analytic skills by exposing them to different points of view, familiarizing them with a variety of theoretical approaches to probe issues, and requiring them to read texts with a critical eye. However, it is not simply the substance of teaching that is different but the entire approach to the educational process. An interactive, student-centered pedagogy means that the classroom is not a one-way conveyor belt of knowledge from professor to student. Specifically, instruction does not simply consist of a teacher reading lectures to students, as is common throughout much of the world. Instead, learning within the classroom is an interactive process. The classroom is an environment in which students are encouraged to question assumptions and conclusions, analyze texts and derive their own interpretations, debate and role play,¹⁵ and to learn from one another, thus democratizing the learning experience. In order to be prepared to participate in this democratized classroom, a significant amount of learning must take place outside of the classroom. Students are expected to engage in primary and/or secondary texts that analyze issues to be addressed during a class. In the natural sciences, for example, this can mean engaging students in 'discovery-based research,' placing them in the labs from day one of their study. As Graham Hatfull, a Howard Hughes Medical Institute researcher from the University of Pittsburg said 'Students should be *doing* science from day one, not just reading about what others have done.'¹⁶ Because of

¹³ For a useful exploration of teaching and pedagogy, see Carol Geary Schneider and Robert Shornberg, 'Contemporary Understandings of Liberal Education,' Association of American Colleges and Universities, 2001.

¹⁴ Vartan Gregorian, quoted in Eugene M. Lang, 'Distinctively American: The Liberal Arts College,' *Daedalus*, Winter 1999, p. 135.

¹⁵ Debate and role-playing, like Model United Nations, are particularly effective learning tools within the classroom. See, for example, William W. Newmann and Judyth L. Twigg, 'Active Engagement of the Intro IR Student: A Simulation Approach,' *PS: Political Science and Politics*, Dec 2000; vol. 33, no. 5 pp. 835-842 and Christopher C. Joyner, 'Foreign Policy: Classroom Debates As Pedagogical Devices,' *ILSA Journal of International & Comparative Law*; Winter 2003, vol. 9, no. 2, p. 331. The impact of simulations and debate goes well beyond foreign policy: studies have demonstrated that they can be impactful tools across the curriculum, including social studies, natural sciences and literature.

¹⁶ Studies have shown that, 'Introducing discovery-based research—challenging, messy, real—into early educational experiences can dramatically improve their outcomes, according to several studies. Students who participate in research

this students are empowered to offer informed insights and even to draw conclusions different from the teacher. The teacher provides guidance, clarifies issues, expresses her views and evaluates the performance of students. However, she does not stand alone, unquestioned: in discarding the lecture-only format, the professor must be willing to give up some authority.

Of course, specific pedagogic approaches will vary according to teacher and subject matter. A LAS system leaves room for different teaching styles. Not all teaching in LAS institutions depends on a pure Socratic method. Moreover, the degree of interactivity can vary according to the subject matter: a course in physics will offer different challenges and take a different structure from a course in history. However, regardless of the teacher and the subject matter, there are certain characteristics that must predominate in a LAS system: learning is interactive, students are encouraged to raise questions, challenge assumptions, and make their own discoveries, the teacher does not have a monopoly on knowledge, and a significant amount of learning takes place outside of the classroom.

Procedures, Rules and Arrangements of a Liberal Arts and Sciences Education

Now that we have examined some of the essential characteristics and concepts that distinguish the LAS as a system of higher education, we must turn our attention to the factors that enable such a system to exist. Here we will look at structural issues that exist at the nexus of administration, curriculum and pedagogy and then some more specific issues pertaining to teaching methodology. The former are particularly important because they are too often afterthoughts: educators are so often focused on the goals of the LAS that they give short shrift to critical mechanisms which make a LAS system work.

Structural Issues

The first important structural issue that has an important impact on a LAS system is the framework that determines the amount of time students regularly spend in the classroom and the number of courses they can take at any one time. Because LAS education consists of a student-centered pedagogy with a democratized classroom it requires that *students prepare for class by reading texts on their own*. It also requires that *students produce written work*: written work enhances communication skills, helps students clarify their understanding of texts, develop ideas and arguments, and analyze and deploy evidence. As a consequence, students are expected to attend and participate in class and must have time to prepare outside work. A logical corollary of this is that students cannot be in class every day for six or seven hours and that they cannot take ten, twelve or even fourteen courses at one time, as was common in many countries of the former Soviet Union. Such structures, which are often created in response to state requirements, leave little time for independent reading and writing by students, thus creating a dependency on the teacher as a purveyor of knowledge. In reality, if the pedagogy at an institution were consistent with the LAS approach it would be difficult, in my mind, for most students to take more than four or five standard courses at one time. (There might be variation for courses with fewer than the standard number of credits). This does not, however, mean that attending class is unimportant. On the contrary: since so much emphasis is placed on learning in the classroom, students must be expected to attend class regularly and to contribute to the learning process by raising questions and participating in discussions. This is not the case in the classical

earn higher grades, show more interest in STEM majors, take less time to earn degrees, and show more interest in post-graduate education.' <http://www.hhmi.org/advance-science/building-authentic-research-experiences> downloaded September 10, 2014.

European systems where attendance at lectures is often optional. Indeed, attendance is so important that many LAS institutions have specific policies that lower grades of students who do not attend class regularly.

A second important structural issue, which moves closer to the issue of teaching, relates to the classroom. In short, *classes must be small* enough or structured in such a way to make interactive teaching is possible. There may be regular small classes (Bard College, where I work, limits most classes to 22 or fewer students) or large classes with a limited degree of interactivity that are regularly divide into smaller discussion sections to discuss in more detail the substance of the lecture and assigned readings. There is no magic number, and much depends on subject and teacher. However, it is clear that an education that takes place exclusively in large lecture halls filled with students is incompatible with LAS teaching methodologies. In most cases, the vast majority of classes at a LAS institution would allow for substantive discussion, and many would have the intimate environment of an academic seminar. In other words, we are talking about low tens of students.¹⁷

The final structural area of importance is the administrative framework: there must be *an academic calendar, credit system, and class schedule that facilitate rather than impede the pillars of breadth and depth* in a LAS educational system. This might sound banal, but one would be surprised at how frequently inattention to such structures can skew the educational process. The most extreme case of this that I have witnessed happened at the Central European University (CEU) in Budapest,¹⁸ a new and very progressive ‘liberal’ (but not liberal arts) institution, where I worked in the mid 1990s: due to the speed with which CEU was established in the wake of the collapse of Communism, it fell into the trap of replicating continental European traditions of departmental autonomy, with departments acting effectively as separate institutions. Departments created their own academic programs from the bottom up, the result being that one relatively small (500 student) university had eight departments with six academic calendars, five credit systems and three definitions of a class hour. These structures created the equivalent of non-tariff barriers between departments, crippling the capacity of students to take courses in other departments (for example, the second trimester for political science students was ten weeks while it was sixteen weeks for history) and impeding the development of interdisciplinary programs, a critical element of the institution’s mission. In other milder cases, even at my current institution, conflicting class scheduling between, for example, the sciences and studio arts, has created insuperable conflicts between disciplines even when there is consistency in calendar and credit system.¹⁹

Teaching Methods

We begin our examination of the procedures, rules and arrangements associated with teaching by focusing on the preparation that must take place prior to the meeting between teachers and students in the classroom. As suggested above, it is essential that students be *assigned readings* prior to classes at

¹⁷ It is also beneficial, although not essential, that the physical set-up of the classroom is such that chairs are set up in a circular or rectangular pattern, rather than facing forward towards the teacher. This breaks down barriers, encourages participation, and reinforces the democratic nature of learning.

¹⁸ At the time, CEU, founded by George Soros, had campuses in Budapest, Prague and Warsaw. Currently it’s sole campus is in Budapest.

¹⁹ For example, at Bard we discovered that students were discouraged, and in some cases prevented, from taking classes in the sciences because core science courses were scheduled to meet on Mondays and Thursdays (with Thursdays including long periods of lab work) while the vast majority of courses in the social studies, arts and humanities were scheduled on Mondays and Wednesdays or Tuesdays and Thursdays.

which the subject of the readings is discussed. Interactive teaching and the democratization of the classroom are fundamentally constrained if students have not read preparatory materials. If no such materials are provided, substantive discussion is extremely difficult and students are reduced largely to asking questions about facts. They are not in a position to challenge their teacher's interpretation or to learn effectively from one another. It should be noted that the nature of assignments could change according to discipline--in the natural sciences students might be assigned a lab or in the arts they may have a photographic assignment or be asked to analyze paintings--but the principle remains the same: students prepare for class because they are participants, not passive recipients of information.

In this context it is essential that *students be provided with a syllabus structured in such a way as to outline specific readings and/or tasks for specific class sessions.*²⁰ A long list of recommended readings for a course, as is common in many countries, does not suffice for two critical reasons. First, there is no assurance that students will know what readings are appropriate for any given class, let alone that they will have read them. Second, the interactive process is paralyzed if there are no common referent points amongst the students: active engagement in the class is necessary and absent the knowledge of what is being discussed and the empowerment that comes from reading primary and secondary texts to be addressed in class that is not possible and the class will devolve into a monologue.²¹

A logical corollary to this is that *assigned readings must be readily available to students.* Whether assigned readings can be purchased, accessed through a library or over the Internet, or given to students, environmental circumstances must exist so that all students can reasonably have the opportunity to read the assigned materials. This might sound intuitive, but I have seen a case in which an entire class was assigned to read a book, one copy of which was available in the entire city. In other circumstances, assigned readings have not been available at all. A fancy syllabus that is not supported by available materials is close to worthless. This speaks to a potentially uncomfortable reality: in order for a LAS system to succeed, extensive investment in libraries and/or modern communications technology must occur.

Another key area of teaching and pedagogy is found in the *evaluation of student work.* While there are many theories about effective evaluation methods, there are certain issues that are critical to the system of LAS education, particularly in terms of promoting transparency and accountability necessary for democratic learning. First, there must be transparency about what types of work contribute to the teacher's evaluation of students. The course syllabus should outline the assignments and tasks that are expected of students and how their performance on those assignments contributes to their final evaluation. Second, contemporary LAS education places an emphasis on continuous assessment, which is to say that the final mark is based on an accumulation of results from a number of assignments, including, but not limited to: mid-way exams, final exams, essays, research papers, oral reports, laboratory research, art projects, and class participation.

²⁰ This syllabus may include many other things, such as a clear articulation of the primary issues addressed in the course, a summary of the main questions to be examined during the course, study tips, and recommended readings. As is discussed below, it should also contain a clear articulation of expectations of students, including all elements that contribute to a student's final grade.

²¹ Informing students of assigned readings as the course unfolds, as opposed to providing them in a syllabus, can theoretically allow students to be prepared for interactive discussion. However, real-world experience leads me to believe that it is a vastly inferior and, in fact, unworkable alternative. In reality, it almost always results in difficulties because materials prove not to be available on short notice, students who are absent do not learn of the assignments, and students are deprived of the opportunity to plan ahead.

There are a number of important points that follow from this. The modern LAS education rejects the near or total dependence on the final examination for a student's grade. In particular it rejects a mark largely or totally dependent on a one-on-one oral exam, a method regularly used in Europe and the former Soviet space. Why is this the case? It is assumed that the goal of the evaluation project is not simply to assess students but to help them to learn and improve: a highly weighted final examination simply does not offer the opportunity for useful feedback. Oral finals are particularly problematic because they are neither transparent nor verifiable. They reinforce the omnipotence of the faculty member and, experience has shown, they leave great latitude for results based inappropriately on extra-curricular issues, including some that are clearly not in keeping with the democratic principles underlying LAS education or liberal education more generally. Does this mean that a modern LAS educational system rejects final exams? The answer is no. A final or an exam at the end of the course can form part of a final mark. Some subjects are more conducive to finals than others. The point is that a final exam should not, as a matter of habit, dominate the evaluation process within a LAS system and that efforts should be made to reduce the circumstances in which the final constitutes all or the predominant part of the grade.

The discussion of evaluation and continuous assessment raises two additional issues. The first one focuses on the type of assignments students are given: it is extremely important in the modern LAS education to require students to write essays and research papers. If a primary goal of LAS education is to foster in students the capacity to communicate proficiently, then students must be required to develop their written skills. Oral skills are no doubt important, and one product of my experience in Russia is a belief that American institutions need to place a greater emphasis here. However, there is no substitute for written communication for developing the capacity to analyze and argue, and through the writing process to develop and refine ideas. It is worth adding that, especially in the Internet age, cultivating in students the capacity to conduct effective research is also vitally important. The necessary skills needed by engaged citizens have changed: instead of learning how to find information they must now learn how to sift critically through the huge volume of information available in print and online.

One final element in terms of evaluation of student work that is important to examine is the nature of faculty feedback to students. A LAS education places a *premium on substantive and timely feedback*. Teacher feedback is one of the primary ways through which learning occurs, particularly in the development of research and writing skills. I have witnessed circumstances in which teachers have made the shift to continuous assessment and assigned research papers but failed to provide students with substantive comments on their work. In some cases students received minimal comments and in other cases they received only grades. This reflects one of the great challenges of LAS education: it is time intensive for the faculty and thus can be costly.

Additional Issues

A number of other procedures, rules and arrangements critical to a LAS system of education are worth mentioning:

- The admissions system must be transparent, free and fair. It is impossible to have a democratic form of education if the starting point is riddled with corruption and nepotism.

- Students need to be advised effectively. Because the system celebrates student choice but maintains a number of requirements, it is essential that students be guided through the educational process.
- The development of a credit system that is translatable across national boundaries is a great benefit. Given that notions of citizenship have gone global and the ever expanding demands for student mobility during the undergraduate years, modern LAS institutions should attempt to ensure that their product is transferable globally and that the system for doing so is both coherent and transparent.

What Liberal Arts and Sciences Education Is Not

Thus far we have attempted to define modern LAS education and identify some of the procedures, rules and arrangements that make such a system of education possible. We have also attempted to articulate why a LAS education cannot be reduced simply to the goals it espouses. For the sake of clarity, however, it is worth devoting some time to underlining what LAS education is *not*. Often LAS education appears to be an empty vessel into which numerous ideas and assumptions are poured. Addressing some common misunderstandings, some of which have been alluded to above, will help to avoid some dead ends.

First, modern LAS education does not take place exclusively at the so-called residential liberal arts colleges that have flourished in the United States and which have long been considered the best institutions for student-centered undergraduate learning.²² Leading international research universities, including large state universities, have managed to create effective LAS approaches. In some cases they have done they have made significant compromises: adjunct professors and graduate students do much of the teaching, and, unlike at the residential liberal arts colleges, some leading professors rarely engage with undergraduates. Others have taken the approach of essentially creating schools or institutes within universities, sometimes called honors colleges.²³ Such an approach is particularly useful in countries undergoing educational reform because it allows reformers to graft modern LAS structures onto established institutions. In so doing the LAS institutions benefit from the universities' resources, particularly faculty, teaching space, and libraries. The faculty can work exclusively in the LAS program or can lead dual lives, as it were, working in the LAS unit while maintaining a foothold in the more traditional faculties/departments.

Second, the LAS focus on teaching does not preclude active research agendas for faculty. Indeed, in spite of sometimes heavy teaching demands, faculty should be encouraged to pursue academic research. Faculty who conduct research tend to be better teachers because they are more knowledgeable about, and engaged with, their subjects and more aware of new theoretical developments within their fields. As Michael Roth, President of Wesleyan, one of America's oldest and most prestigious residential liberal arts colleges, says, 'At liberal arts schools like Wesleyan... the scholar-teacher model means that our faculty believe in a virtuous circle connecting their scholarship to their undergraduate teaching. Stimulation in the classroom, they find, advances their research in ways that, in turn, invigorate their teaching and stimulate curriculum development.'²⁴

²² See 'Distinctively American: The Liberal Arts College, *Daedalus*, vol. 128, no. 1, Winter 1999.

²³ See, for example, the University of Michigan, http://www.lsa.umich.edu/lsa/parents/liberal_arts/.

²⁴ Michael Roth, 'The Proper Role of Interdisciplinary Studies,' http://www.huffingtonpost.com/michael-roth/the-proper-role-of-interd_b_471063.html, downloaded September 10, 2014.

Third, there is nothing incompatible between LAS undergraduate education and high international rankings that, unfortunately, are the focus of so many educational administrators. In fact, the opposite may be true: most of the top-ranked institutions in the most cited ratings (*Times Higher Education*, Shanghai Index, QS etc.) are committed to LAS education. Yale University sees its undergraduate school, Yale College, as ‘the heart of the University’ in which ‘more than 2,000 undergraduate courses in the liberal arts and sciences are offered each year, forming a curriculum of remarkable breadth and depth.’²⁵ Columbia University describes its rigorous core as ‘one of the nation’s oldest and most renowned liberal arts programs and the hallmark of the Columbia academic experience.’²⁶ According to Stanford University, ‘A Stanford undergraduate education emphasizes a broad liberal foundation, development of deep subject-area knowledge, a variety of rich learning experiences inside and outside the classroom, and the cultivation of skills to help students become lifelong learners.’²⁷ While they often have larger classes than residential liberal arts colleges and rarely have the same commitment to undergraduate learning, particularly amongst their most prominent faculty, they still provide a LAS education.

Conversely, it is worth stressing again that residential liberal arts colleges, which offer the most pure form of LAS education, offer incredibly strong educations in spite of the fact that the best among them never appear on the world rankings. They have too few professors to meet ranking criteria and the methodologies for most of the major rankings de-emphasize, and in fact devalue, undergraduate teaching. If, for example, one were to change the formula of some surveys to assess universities on the number of Nobel Laureates who studied there as undergraduates, as opposed to who teach there, a much better indicator of teaching success, one would find that a liberal arts college like Swarthmore has had more undergraduate recipients than Princeton and Amherst has had more recipients than Stanford. The rankings are a poor indicator of what educators should care about, but they should not deter those interested in developing quality undergraduate LAS education.

Fourth, a LAS education does not sentence graduates to a lifetime of unemployment. The opposite is true: many employers, including those in areas of business and finance, seek to hire LAS graduates, and many are LAS graduates themselves.²⁸ LAS education prepares graduates for new economic conditions that emphasize flexibility and adaptability instead of single-company or single-industry lifetime employment.²⁹ By focusing on the development of the person and endowing students with the capacity to think critically, problem solve, and communicate effectively, LAS education fosters in students the capacity to respond to changing circumstances. That is an essential part of the LAS wager. LAS graduates might start with as much content knowledge as non-LAS students, but they come with a training in research, skills in knowledge acquisition, and the ability to

²⁵ <http://www.yale.edu/academics/> downloaded September 10, 2014.

²⁶ <https://undergrad.admissions.columbia.edu/collections/academiclife/core>.

²⁷ <http://www.stanford.edu/academics/> downloaded September 10, 2014.

²⁸ Hart Research Associates, ‘It takes More Than a Major: Employer Priorities for College Learning and Student Success: What Employers Want from College Graduates,’ *Liberal Education*, Spring 2013, vol. 99, no. 2.

<http://www.aacu.org/liberaleducation/le-sp13/hartresearchassociates.cfm>, downloaded September 27, 2014. See also, Richard H. Hersh, ‘The Liberal Arts College: The Most Practical and Professional Education for the Twenty-First Century,’ *Liberal Education*, Summer 1997, pp. 26-33.

²⁹ A World Bank report on education in Europe and Central Asia stresses that the shift from centrally planned to market economies ‘will increasingly require workers with better information-processing, problem-solving, and knowing-how-to-learn skills. Available international test data show that ECA (Europe and Central Asia) countries are significantly behind OECD countries in many such skills.’ Sue E. Berryman, ‘Hidden Challenges to Education Systems in Transition Economies,’ The World Bank, Europe and Central Asia Region, Human Development Sector, September 2000, p. 13.

problem-solve that in the long run are likely to make them greater contributors to their places of employment than their more narrowly trained colleagues.

Fifth, LAS graduates are not less competitive in pursuing specialized graduate study. In fact, quite the opposite is true. A study by Nobel laureate Thomas R. Cech that focused on the performance of graduates of liberal arts colleges demonstrated that, 'Liberal arts colleges as a group produce about twice as many eventual science Ph.Ds. per graduate as do baccalaureate institutions in general, and the top colleges vie with the nation's very best research universities in their efficiency of production of eventual science Ph.Ds.'³⁰ Indeed, at the time of Cech's study, liberal arts colleges constituted three of the top six and eleven of the top 25 institutions in the US in terms of producing undergraduates who completed doctorates in science and engineering.³¹

Sixth, the LAS need not replace the predominant educational system. It can coexist with and even productively interact with more traditional systems. One important point worth noting is that we have found in our experience in Russia that faculty who teach both in the LAS college and in traditional departments internalize many of the LAS teaching methods they are required to incorporate into their teaching in the LAS program and apply them, where possible, to their other educational contexts. Liberal arts institutions can impart some of the values of LAS education even to traditional institutions. The LAS model, then, should be viewed as complementary rather than competitive.

Seventh, LAS institutions are not associated exclusively with politically liberal outlooks. Indeed, if they wish to develop critical thinkers and active citizens, they should ensure that students are exposed to a number of perspectives, including those associated with more politically conservative approaches to issues. LAS institutions have ample room for faculty and students, as well as assigned readings, that represent the political spectrum.

Finally, LAS is not a static system of education. One of the reasons it has thrived for so long is its capacity to modify its procedures, rules and arrangements in response to changing circumstances. As technological changes continue, teaching approaches will evolve. As the LAS system goes global, it will incorporate national traditions and adjust to new environments. There are many elements that will remain essential to a LAS education, but as a system it is not stuck in time.

Concluding Reflections

To a large extent, this paper has been written in response to the growing interest in LAS education across the globe. However, as potential reformers and their supporters consider embarking upon the LAS project, there are a number of challenges to keep in mind:

- The LAS system is resource-intensive. The LAS system needs more faculty and a greater number of classrooms than other systems of higher education. It also requires a library and/or communications technology that can accommodate the large volume of assigned readings and sufficient administrative resources to ensure that the complex structure remains

³⁰ Thomas R. Cech, 'Science at Liberal Arts Colleges: A Better Education?' *Daedalus*, vol. 128, no. 1, Winter 1999, p. 213. Cech continued, 'On a more subjective note, when highly successful scientists compare their liberal arts college education to what they likely would have received at a large research university, most rate their college experience a substantial advantage to their career.'

³¹ Cech, 'Science at Liberal Arts...' p. 200.

coherent. Given increasing demands on state budgets, potential reformers will have to be creative in finding ways to adapt the system if it is to 'go global' as so many seek.

- The LAS curriculum can conflict with state standards. In countries where there are many curricular requirements (ranging from the number of courses to the subjects that must be covered), there need to be compromises on the part of the state or creative solutions within the curriculum. Smolny College in Russia has been fortunate that the Ministry of Education has been so responsive to this new form of education and, in fact, implemented one of the most important educational reforms in post-Communist Europe in response to the curricular demands of the LAS. Not all ministries will be so responsive.
- The LAS pedagogy can be tremendously challenging to faculty accustomed to more didactic approaches. For teachers who are used to reading lectures, particularly ones who have been doing so for decades, the democratization of the classroom can prove extremely troubling, particularly when it entails students challenging their interpretations. Moreover, as we mentioned earlier, the time commitment necessary for LAS teaching can also prove problematic: faculty need to prepare their course syllabi and ensure readings are available, read multiple written assignments and provide feedback to students. In places where economies dictate that faculty have two or three jobs, they simply may not be able to devote the time necessary to respond to the demands of the LAS.

That having been said, many faculty who have recently been introduced to the LAS approach have found it to be liberating and tremendously rewarding. They happily trade in their old notes and their total command of the classroom for the new learning environment, complete with stimulating interchanges and challenging discussion. The diverse curriculum can also allow them to explore new issues in their classes and shape their courses by drawing on different disciplines.

- Considerable thought needs to be given to how a LAS undergraduate degree can mesh with graduate programs designed for more intensive forms of education. The depth that LAS provides should qualify students for graduate programs, but much negotiating may need to take place with faculty and administrators of graduate programs who are more accustomed to looking at the volume of courses instead of quality of learning. In some instances accommodations will have to be made to allow for a smooth transition. However, this does not mean that LAS graduates are not up to the challenge. Nothing illustrates this better than the US experience in science and engineering in the work by Thomas Cech cited above, areas in which one would think LAS graduates might not be competitive in terms of their capacity to succeed in graduate school.

The LAS system is not a magic bullet that will solve all of society's problems. However, when properly constituted, it offers a coherent approach that endows students with abilities that will prepare them for a lifetime of civic engagement, learning, and employment. In countries where vocational training, hyper-specialization and didactic pedagogic approaches dominate higher education, it can offer an alternative that will resonate amongst students and faculty. It is not an easy system to adopt, but the rewards may well be worth the investment.