UNIVERSITY ENVIRONMENTAL SCAN

September 2013

PURPOSE AND PROCESS

Definition of Environmental Scanning

Environmental Scanning enables the understanding the changing external environment that may impact the organization and plays a key role in Strategic Planning, as diagramed below:

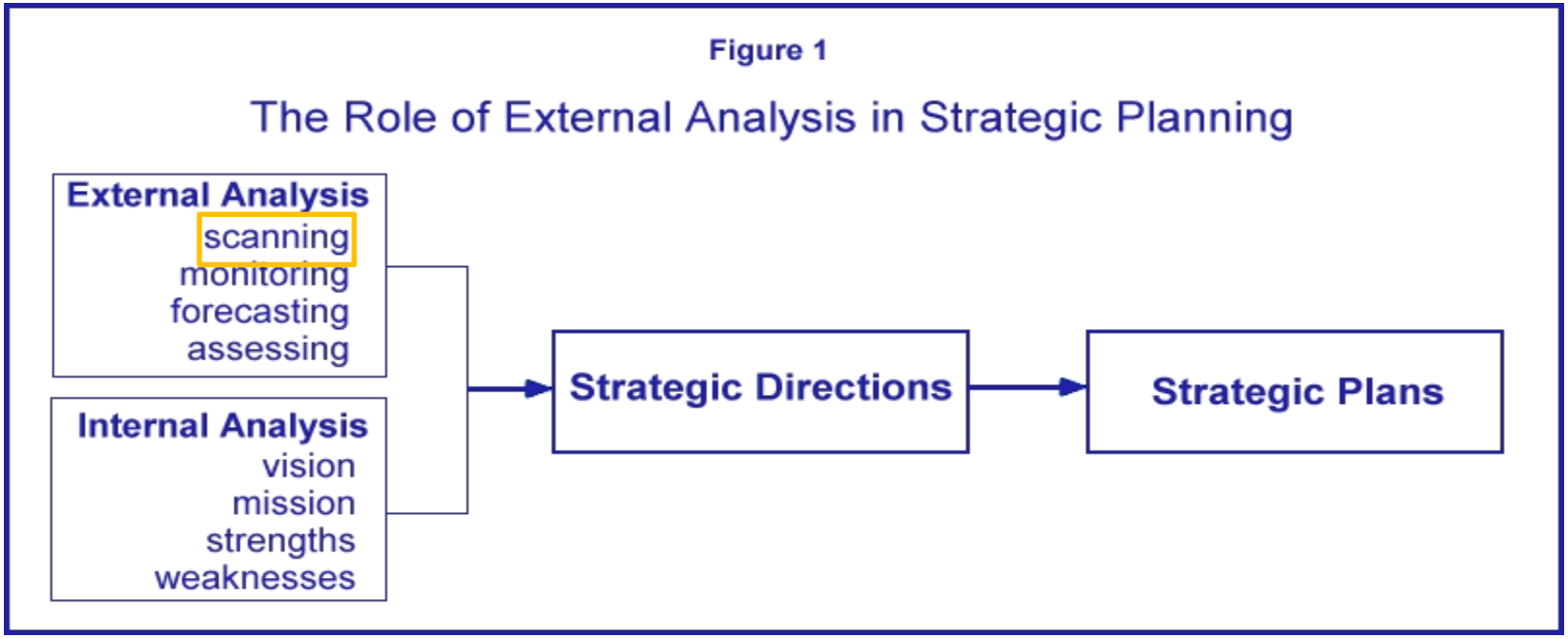

Image taken from http://horizon.unc.edu/courses/papers/enviroscan/ Environmental Scanning, By James L. Morrison

An Environmental Scanning "science" has developed with a common language and several canons of categorization for purposes of collecting and organizing a wide range of data for tactical and strategic decision making. The schema used here follows a popular convention: **Society**, **Technology**, **Economy**, (Natural) **Environment**, and **Politics** (STEEP.)

KEY POINTS

While no trend may be fairly called "disruptive", higher education is at least "dynamic". It appears that:

- We are likely to see **increasing scrutiny and regulation of higher education.** Federal oversight will inevitably change not just the way colleges report but also the way they do business. This is most in evidence in financial aid, but has ramifications for all organizational elements. In any case, **high costs of higher education (and student debt)** continue to be a hot topic.
- Indeed, the primary focus of the President's second term is the Better Bargain for the Middle Class initiative – and the sole focus of which, at this writing, is the high cost of college! **The President seeks to evaluate college "outcomes", and use** in "ranking" colleges to determine how much federal aid can be brought into a college. The President's plan also seeks to assist students with debt and introduces a *Pay as You Earn* schedule.
- In addition to regulation, high costs are bringing about a technological response. **Massively Open Online Courses** (MOOCs) continue to get coverage. (Young, 2013)
- However, although the idea of MOOCs was initially that of **open and affordable (or even free) courses**, MOOCs are falling into proprietary hands. While some MOOC businesses anticipate profit by "selling" names and grades of students to potential employers, (Young, 2012) because MOOC companies still have yet to make money, there is still a good chance they will introduce fees even to students at participation categories not previously charged for MOOCs.
- For colleges contemplating offering MOOCS, perhaps one big issue is what the more "impersonal" interface does for learning.
- Other technological trends include: tablet computing, 3-D printing, and wearable technology. And in technology, as well, some see tension between proprietary vs. open source. For example, one tech trend identified, "Learning Analytics" (analysis of the effectiveness of various methods), raises **questions about the availability of data** collected by proprietary platforms to all who want to use.
- Fearing monopolies of another kind, and wishing to avoid the high cost of college, **students are beginning to strike paths of their own** – creatively combining community college, online courses, and CLEP to build so-called Do It Yourself ("D-I-Y") degrees.
- Students strike their own paths *on campus*, as well. The big news in campus environmentalism is the strength of – and admitted need for -- **student (grass-root) initiatives**.
- Divestiture is one such student-led cause, and the focus of these divestiture projects is often corporate polluters. However, some see the organization of these protests as being more generally motivated by **deep undercurrents** related to structural issues of society and connected to large scale protests -- ranging from Occupy and Tea Party to the Arab Spring – seeking to challenge leadership.
- The **anemic recovery** combined with characteristics of the current student population bring about student dynamics that present challenges but also refreshing "educational" opportunities.

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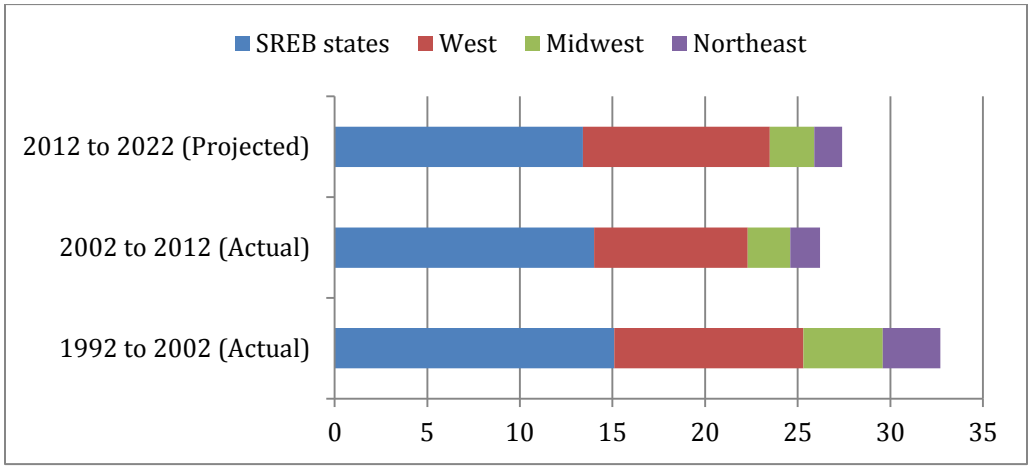
SOCIAL

Population

US Population Growth

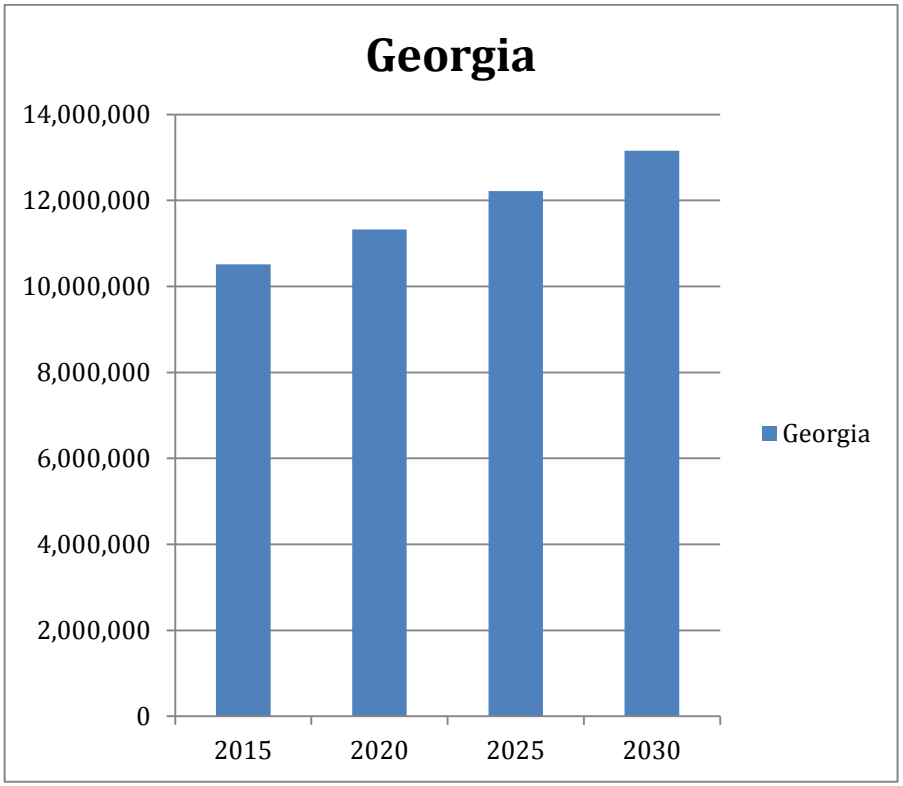
From 2002 to 2012, the region's population increased by 14 million. In the prior decade, it increased by 15.1 million. Looking ahead from 2012 to 2022, 49 percent of the nation's projected population growth is expected to be in SREB states. This means that by 2022, SREB states are projected to account for more than 38 percent of the U.S. population — up from 37 percent of the national total in 2010 (page 1, Marks, 2013).

Regional Population Growth (in millions)



Georgia Population Growth

For Georgia, in particular, the effect is even more pronounced. Over the next two decades, between 2012 and 2030, the state's population is projected to grow by an additional 3.1 million people: according to the current projection, Georgia's population will increase 31%, from 10 to 13.2 million people by the year 2030. Incidentally, in 2012, Georgia was the nation's 8th most populous state.



Georgia Residential Population Projections: 2010 - 2030

Year	State Total
2012	10,015,947
2013	10,180,424
2014	10,344,900
2015	10,509,376
2016	10,672,858
2017	10,836,340
2018	10,999,823
2019	11,163,305
2020	11,326,787
2021	11,505,364
2022	11,683,941
2023	11,862,518
2024	12,041,095
2025	12,219,672
2026	12,406,644
2027	12,593,615
2028	12,780,587
2029	12,967,558
2030	13,154,530

Source: Governor's Office of Planning and Budget – Population Projections 2013 (Georgia Governor's Office of Planning and Budget, 2013)
Provided by Kinsella, Kathy kathy.kensella@opb.state.ga.us (404) 656 6515

Georgia Population Growth Compared to Region

(Page 8, Marks, 2013)

	Number (in thousands) 2012	National Rank				Percent Change		
		Actual			Projected	Actual		Projected
		1992	2002	2012	2022	1992 to 2002	2002 to 2012	2012 to 2022
Southern States	116,625	---			---	17.2	13.7	11.5
Georgia	9,920	11	10	8	8	25.9	16.6	11.7

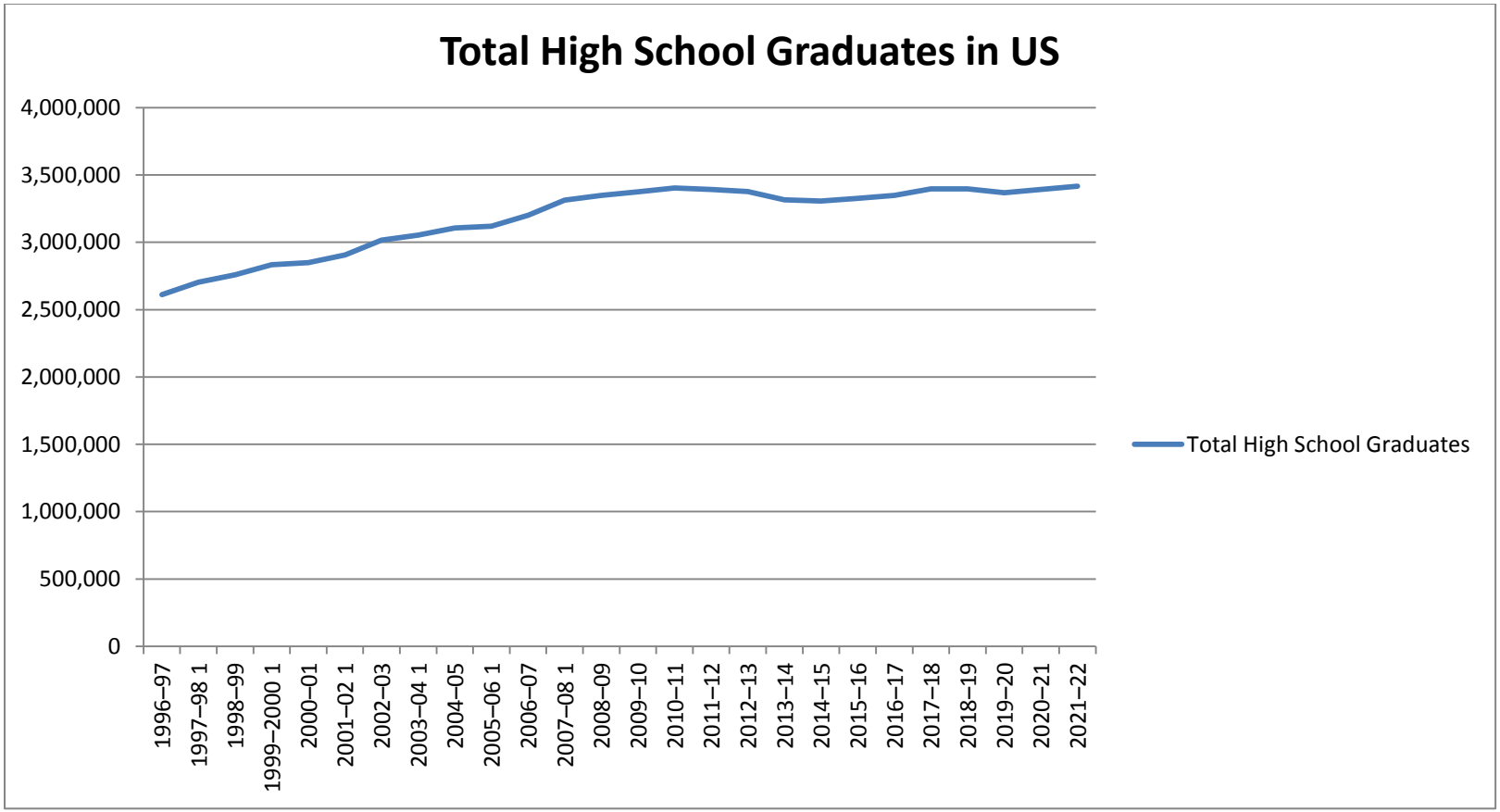
Of course, many things can mitigate a population increase's impact on higher education enrollments. One of these is age. Georgia will continue to be a retirement destination for many from the North and the West, and much of the increases in population will continue to be explained by increases in the ranks of seniors.

Adult Learners

Colleges with programs for adult learners usually focus on the population within the ages of 25-44. Within this demographic, they focus particularly on those without "Associate's or Higher Degree" – which, in Georgia, is 62.2 percent of that working age (25-44) population: (within the adults aged 25 to 44 in Georgia) those without High School Diplomas or GED credentials were 373,000; without Associate's Degree 1,697,000; and without Bachelor's Degrees 1,900,000. (Table 3, Marks, 2013)

High School Graduates

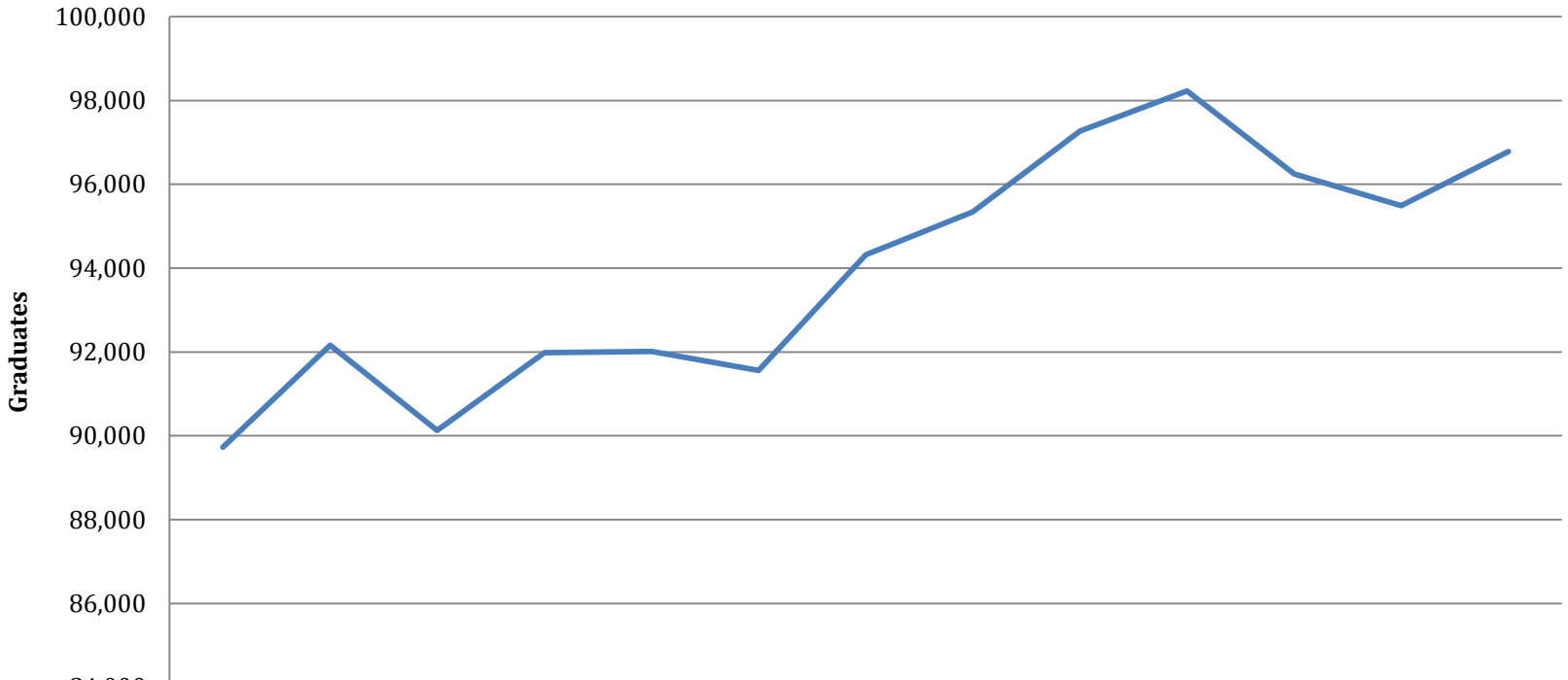
Nationally, through the year 2021-22, high school graduations should remain fairly constant. The graduating population for Georgia, however, is projected to increase somewhat. Please see charts below.



(National Center for Education Statistics, 2012a)

Source: National Center for Education Statistics, Projections of Education Statistics to 2020.

Actual and Projected Numbers of High School Graduates, *Georgia*: School Years 2002-03 through 2020-21

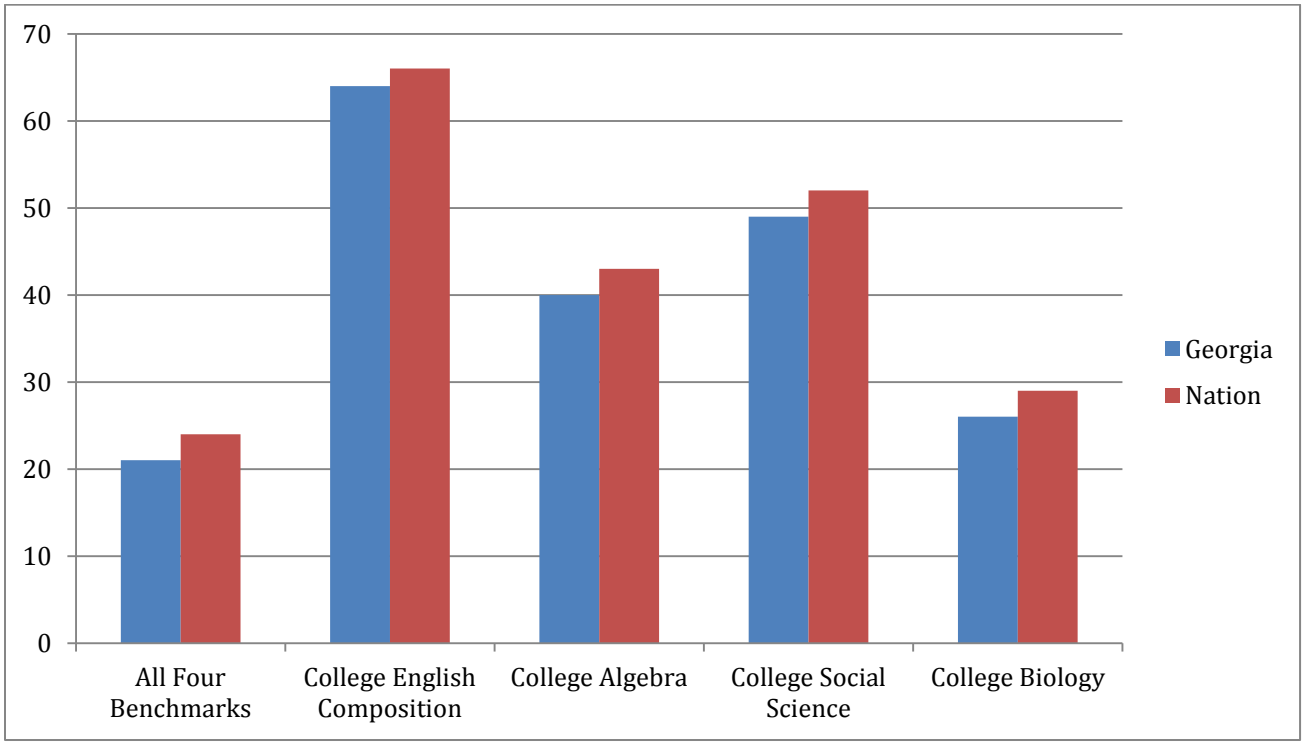


	2009–10	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
Georgia	89,730	92,160	90,130	91,980	92,010	91,560	94,320	95,340	97,270	98,230	96,250	95,490	96,780

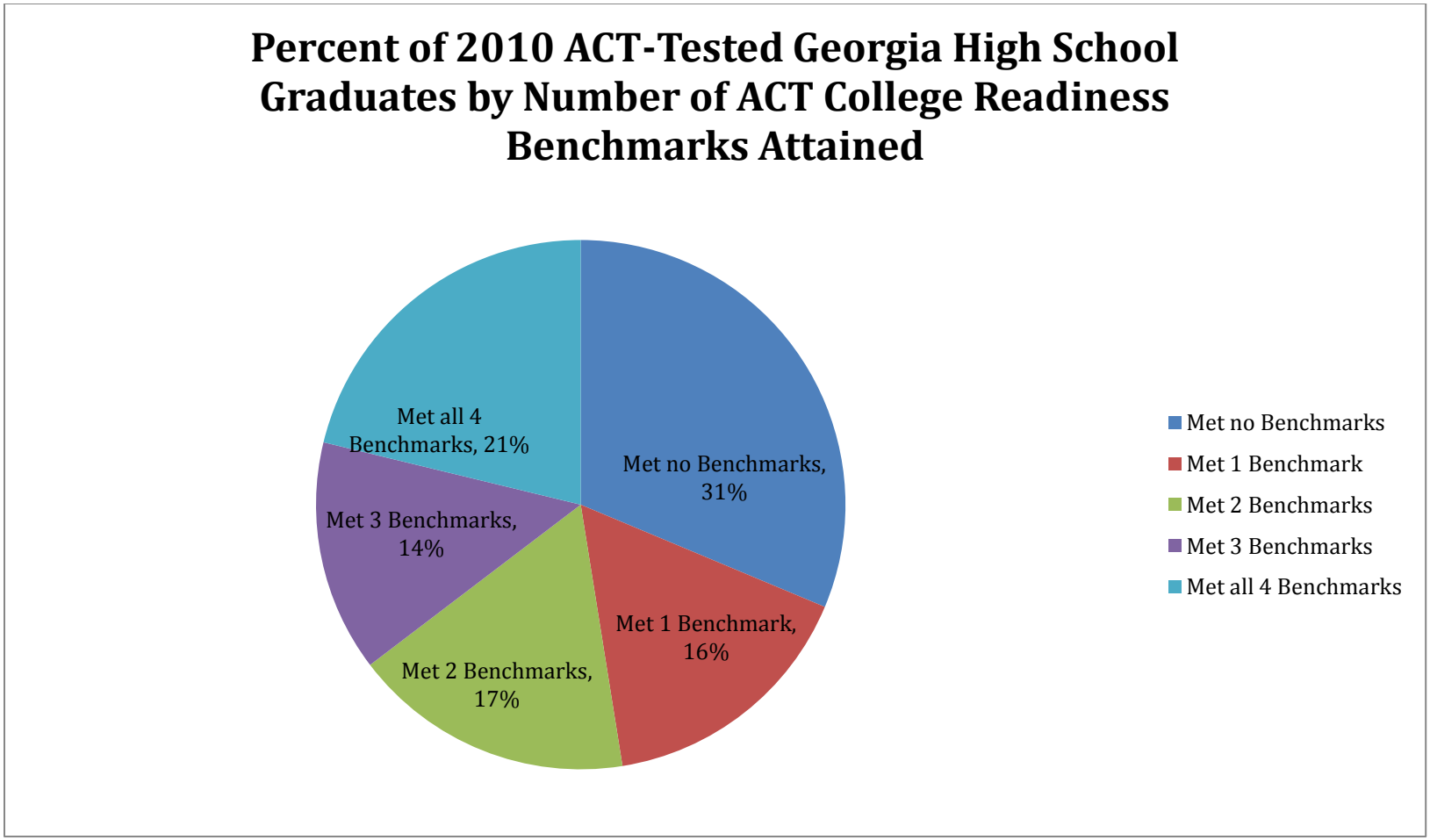
(National Center for Education Statistics, 2012b)

College Readiness

The following graphics show the percentages of Georgia high school graduates in 2010 whose ACT scores met particular benchmarks establishing "college readiness" in that area. The first chart shows GA student scores compared to National scoring percentages while the pie chart following shows the percentage of students who met particular numbers of benchmarks.



(Page 3, ACT, 2012)



(Page 3, ACT, 2012)

College Participation Rates

"More students are pursuing higher education in the US than ever before. Total enrollment in degree-granting institutions reached almost 21 million in Fall 2011. These students are increasingly diverse, are still predominantly young adults and are taking more classes online – some while still in high school. More than half a million other students attended non-degree-granting postsecondary institutions." (Page 33, Marks, 2013)

College Participation Patterns

"…the path to college success is not a linear one for many students. There are significant numbers of qualified students who move through (or in and out of) multiple postsecondary experiences as they pursue their educational goals. Consider the following characteristics of undergraduate students:

- 11% of students simultaneously enrolled in more than one institution
- 41% of graduates attended more than one institution
- 38% enrolled part time
- More than 2 million students brought college credit with them at the time of first full-time enrollment (dual credit, AP, online, or CLEP)
- 30% delayed enrollment a year or more
- 25% of undergraduates are over age 25
- 30% of undergraduates enrolled in an online course
- 29% of community college students transfer to four-year colleges
- 14% transfer from four-year to two-year colleges" (Page 2, ACT, 2012)

College Participation between Public, Private and Proprietary

The following chart reveals a decline in Four-Year For-Profit enrollments, while other two platforms seem to be holding their own.

Sector	Fall 2010 Enrollment	Fall 2011 Enrollment	Fall 2012 Enrollment
All Sectors	20,510,526	20,556,272	20,195,924
Four-Year Public	7,712,447	7,819,806	7,769,609
Four-Year Private Nonprofit	3,579,325	3,697,254	3,714,967
Four-Year For-Profit	1,639,196	1,577,290	1,463,097

Source: National Student Clearinghouse Research Center "Term Enrollment Estimates, Fall 2012" pages 1-2:
http://research.studentclearinghouse.org/files/TermEnrollmentEstimate-Fall2012.pdf

Enrollment in Southern States grows faster than in nation

From 2005 to 2010, college enrollment in Southern states (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia) increased by an average of 26.4%, thereby outstripping the nation growth rate of 20.2%. In 2010, the enrollment headcount for the entire U.S. exceed 21 million students with 31.5% (6.6 million) of those enrolling in Southern institutions. From 2005-2010, eleven Southern states (all except for Kentucky, Mississippi and Oklahoma) had college enrollment growth rates higher than the national average. (NCES, 2011)

Student Characteristics

This generation

The generation comprised of those born between roughly 1980 and 2000, known as the "millennial" generation, has been described colloquially and statistically as a cohort of narcissistic, fame-obsessed, lazy and developmentally-stunted young men and women. According to Stein (2013), 40% believe that they deserve a regular 2-year raise regardless of work quality, 3 out of 4 middle school girls in 2007 preferred becoming personal assistant to a famous person over becoming a Senator and, in 2012, more 18-29 year olds lived with their parents than with a spouse.

However, a debate exists about their redeeming qualities. Stein (2013) makes the cases that, while millennials don't particularly respect authority, finding instead a challenge in thinking of ways around the rules, they also don't resent authority and are the first generation of teens to not rebel. They hide behind a veil of technology, but if their older family members adopt newer technologies, millennials actually have stronger bonds with those family members than in previous generations. In some ways, their "entitled" expectations of quality and immediacy of customer service and support leads to them applying critical thinking, making better decisions and negotiating better contracts in the marketplace and the workplace. As well, their "narcissistic" views of their own self-efficacy can lead to optimism in the face of considerable political, environmental and economic challenges (Stein, 2013).

Largely due to the unprecedented growth curve of technology, the gap between millennials and other generations is the largest ever witnessed. Their mindset, largely created by the influence of technology in their environment, is intrinsically distinct from the mindset of their parents, employers and teachers. In order to overcome these differences, older generations must be open to learning about this new generation, their native techno-environment, and the mindset which it breeds. It is particularly important for institutions to 1) invest in technology which allows students to engage and 2) listen to feedback from faculty and counselors who have the most face-to-face contact with students.

The following assumptions from Frand (2000) are trends of the millennial mindset:

- "Computers aren't technology" – computers are a natural part of the landscape
- "Reality no longer real" – images, text and email addresses in the "from" line are all alterable
- "Doing rather than knowing" – facts are easily accessible and tend to have a short half-life
- "Nintendo over logic" – trial-and-error learning may be preferable to logical problem solving
- "Multitasking way of life" – it's comfortable for many millennials and may relieve anxiety
- "Typing rather than handwriting" – they are almost proud of atrocious handwriting
- "Staying connected" – 24/7 access to information, services and social networks is mandatory
- "Zero tolerance for delays" – responses should occur immediately through a variety of media
- "Consumer/creator blurring" – if something is digital it supposedly belongs to everyone

Duly, a change in student mindset suggests a renovation in pedagogy and student support informed by studying emerging thinking patterns in the new generation.

> [Students'] thinking patterns have changed over intense and consistent exposure to the technological stimulus. It is necessary for faculty now more than ever to learn about learning and benefit from the diversity of disciplines, like neurobiology, to keep abreast of these new and compelling topics. … As digital immigrants, we faculty have different learning styles than the millennial generation.
>
> The National Training Laboratories reports a shift in the average retention of different learning activities. Student's retention average from lecture is only 5%, and from reading is only 10%. On the other hand, retention average for discussion groups is 50%, 75% for practice by doing, and 90% when the student experiments in a teaching role."
>
> [Student service providers] also need to develop virtual counseling tools, understand and extend the existent customer service model using technology and new formats (FAQs, Email, cell phone, instant messaging) (Rivera & Huertas, 2006).

Diversity

From 2001 to 2011, the black and Hispanic populations grew faster than the white population nationwide. In the South, the black population grew 15 percent, the Hispanic population grew 54 percent, and the white population grew 4 percent. Consequently, the proportion of the white population dropped from 66 percent of the total to 60 percent. Black representation remained about 19 percent. Hispanic residents rose from 12 percent to 16 percent of the regional population. In total numbers in Southern states, these changes amounted to 6.6 million more Hispanic persons, 2.8 million more black persons and 2.5 million more white persons (Marks, 2013).

Attainment of bachelor's degrees or higher among white adults in Southern states and the nation continued to exceed that of black and Hispanic adults by a wide margin. In 2011, among adults ages 25 and older, 28% of white adults had a bachelors, 18 percent of blacks, and 15% of Hispanics had a bachelor's degree or higher.

Nationally, college enrollment rates of college-aged Hispanics and Black (non-Hispanic) is 35 percent and 36 percent, respectively. All races for 2011 was 42%. Total enrollment in US of college-aged students was around 12.6 Million: 9.8 million were white; 2.1 were Hispanic; and 1.6 million were black. (From call to Joe Marks, 8/2/2013)

Transnational Students

"The dynamics of internationalization are changing. Many of the students that traditionally would have traveled overseas to study for an international qualification are now pursuing foreign degrees in their home, or neighboring, countries at local institutions through an array of collaborative arrangements with degree-awarding institutions from major education-exporting countries (Clark, 2012).

> This growing consumer class in Asia will expand a new segment of students who are willing to pay for a global educational experience while staying in their home country or region … Glocals are characterised by aspirations that usually outstrip

both their ability to afford a full fee-paying overseas education and their academic merit to gain admission to an overseas institution with financial aid. The traditional segment of international students go abroad for a combination of reasons such as career advancement, quality of education, immigration or the experience of living abroad. Glocals differ from this traditional segment as they look for career advancement and quality of education, without having to go very far from home [through international branch campuses, twinning arrangements and online education… "offshore provision."] High-quality collaborations, such as the one between Yale-NUS in Singapore, are also anticipated to attract glocals. (Choudaha, 2012)

In terms of absolute numbers, more than 400,000 students were enrolled in the UK institutions through TNE. More than 100,000 students were enrolled in Australian institutions (Choudaha, 2012).

TECHNOLOGY

MOOCs (Massive Open Online Courses)

MOOCs (Massive Open Online Courses) continue to be a trending topic in educational forums and the minds of both education innovators and defenders of traditional education. Organizations which offer MOOCS by partnering with physical campuses report increases in student enrollments, number of partnering institutions and number of course offerings. As of May 2013, barely a year after its inception, the MOOC company Coursera boasted over 3.6 million students choosing from 376 courses offered by 80 partner institutions (www.coursera.org). In terms of the global proliferation of the MOOC phenomenon, EdX, the MOOC project founded by Harvard and MIT, offers 57 courses from over two dozen partner institutions, about half of which are located outside of the U.S. in countries including Australia, Belgium, Canada, China, Germany, Japan, Korea, the Netherlands, Sweden and Switzerland (www.edx.org).

Despite the astounding number of students engaging in MOOCs, a debate still rages in academia and elsewhere regarding the efficacy and long-term impact of MOOCs. Along the lines of older arguments for and against online education of any kind, MOOC proponents posit that these offerings make education more accessible to students, particularly adult learners, who have non-traditional schedules or are unable to relocate for school. Meanwhile MOOC opponents argue that the lack of face-to-face instruction and engagement causes online course offerings to be essentially a data-dump, i.e. students memorize facts and formulae in order to pass tests, but never develop deeper understanding of the material.

Unique to the MOOC arena, though, where courses are generally free of charge and divorced from a program of study, Berrett reports other benefits of MOOCs include modularity (students can take a single course on a subject of interest without committing to an entire program), flexibility (students have supreme control over their work schedule, slipping in a five-to-eight minute lecture video between other tasks, on a bus, etc.), and universal access to well-crafted courses by talented faculty at elite institutions. (Berrett, 2013)

However, according to Berrett, opponents additionally argue that, especially in light of universities purchasing pre-made course packages of MOOC content from other universities, the MOOC system will lead to the replacement of faculty with cheap online education, that the less fortunate students will be relegated to learning only in MOOC and online formats, and that the particular

biases of a single MOOC-creating faculty member could be spread en masse, leading to a breakdown of diversity of thought in key areas like ethics and philosophy (Berrett, 2013).

These concerns aside, MOOCs carry an additional investment of time and work on the part of the offering faculty with no clear data indicating the actual effectiveness of MOOCs in educating students. In February of 2013, The Chronicle surveyed 184 professors who had taught or were teaching a MOOC. Of the 103 responding faculty, 97% reported having created their own original video content and only 19% said that teaching their MOOC did not divert time from other duties like research, committee work and teaching traditional courses. Of these 103 faculty, 28% said that students who succeeded in their course deserved formal credit from their institution, while 21% said that MOOCs are "not worth the hype." (Kolowich, 2013a)

True to the definition of "disruptive technology," MOOCs are also causing unforeseen changes on the fringes of other educational phenomena. Students enrolled in MOOCs, but who are otherwise complete strangers, form meet-up groups in their geographic area to discuss topic matter. MOOC content is used by some faculty as they experiment with the notion of "flipping the classroom," i.e. having students watch the video equivalent of the lecture portion of class beforehand so that class time can be focused upon hands-on activity and discussion.

Through its non-free "Signature Track," Coursera offers students a certificate of completion from the institution which offers their MOOC provided that they meet the requirements of completion (Coursera, 2013). These certificates do not innately carry course credit, though they are purported to enhance students' resumes/CVs. They are also believed to increase motivation as Coursera reports a 70% completion rate among students who enroll in the Signature Track in contrast to the average MOOC completion rate believed to be around 10% (Kolowich, 2013b). In April 2013, Coursera awarded its first nearly 1,000 such certificates for courses in nutrition, genetics, microeconomics, bioelectricity, algebra, pre-calculus and calculus.

Building on the MOOC idea, the company StraighterLine has begun collecting online courses offered through about three dozen universities, and providing these to students in packages which cost significantly less than the student would pay by enrolling at a single school (www.straighterline.com). These courses are offered on the basis that they will transfer automatically to the offering institutions or to 1,800 others through the ACE Credit service. StraighterLine also offers PLA (Prior Learning Assessment) testing, which confers course credit based on a single proficiency exam with no other course requirements. In summary, such an offering

means that students could potentially complete several of their prerequisite and general education courses before transferring to another university while making considerable savings and not having to relocate immediately. The StraighterLine "Freshman Year" bundle includes 10 courses to be chosen from a list of 53 general education courses, as well as tutorial and human grading/feedback support – for $1299 (straighterline, 2013).

It is too early to know the long-term impact of such systems on student enrollment, student attrition or university culture buy-in, but just as with the entirety of the MOOC phenomenon, the current state of traditional education is certain to change as these developments evolve.

Other Trends

Each year the "Horizon Report" identifies six emerging technologies likely to have a significant impact on higher education in the next one to five years. The research behind this year's edition is jointly conducted by the New Media Consortium (NMC) and EDUCAUSE. Over the decade of the NMC Horizon Project research, nearly 750 internationally recognized practitioners and experts have participated on project advisory boards. The advisory board members are questioned on a number of aspects of emerging technologies. The report is distilled from these questions. Summaries of the six trends identified in this year's report (Johnson et al., 2013) follow:

Timeframe: The Next 12 months...

- ***Massively open online courses*** [See above].
- ***Tablet Computing:*** has carved its own niche in education as a portable and always-connected family of devices that can be used in almost any setting. Equipped with WiFi and cellular network connectivity, high-resolution screens, and with a wealth of mobile apps available, tablets are proving to be powerful tools for learning inside and outside of the classroom. Many universities have already designed software for tablets along with best practice guidelines for educators and students. With more major manufacturers producing tablets all the time, the competition in the tablet computing market is a significant driver of innovation. As the market matures, students and institutions can expect a rich and growing array of features from these small devices.

Timeframe: Next 1-3 years....

• ***Games and gamification*** are two sides of the same approach. Educational games immerse the student in the game, where content and curricula are delivered or juxtaposed. Gamification aims to incorporate elements of games, such as levels and badges (but also via quests and other strategies) into non-game activities. In gamified curricula, students can accumulate points or other rewards by accepting different challenges, and often have more freedom in choosing what kind of assignments they undertake to earn them. Badging or ranking systems serve to recognize student achievements, and the transparency of student progress inspires competition that can drive more interest in the material among students.

•***Learning analytics*** is the field associated with deciphering trends and patterns from educational big data, or huge sets of student-related data, to further the advancement of a personalized, supportive system of higher education. Preliminary uses of student data were directed toward targeting at-risk learners in order to improve student retention. The widespread adoption of learning and course management systems has refined the outcomes of learning analytics to look at students more precisely. Student-specific data can now be used to customize online course platforms and suggest resources to students in the same way that businesses tailor advertisements and offers to customers. Universities are already employing analytics software to make the advising process more efficient and accurate, while researchers are developing mobile software to coach students toward productive behaviors and habits that will lead to their success..

Timeframe: 4-5 years...

•***3D Printing*** has become much more affordable and accessible in recent years in large part due to the efforts of MakerBot Industries. Founded in 2009, this company has promoted the idea of openness by offering products that can be built by anyone with minimal technical expertise. With MakerBot Replicators selling in the range of $1,500 to $3,000, it now only requires a small financial investment to own a 3D printer. Websites including Thingiverse offer source files that anyone can use to print objects without original designs. In an educational context, 3D printing is already implemented in a number of research and lab settings. Over the next four to five years, 3D printers will be increasingly used in the arts, design, manufacturing, and the sciences to create 3D models that illustrate complex concepts or illuminate novel ideas, designs, and even chemical and organic molecules.

•***Wearable technology***: will increase in impact as enabling technologies, such as augmented reality and thin film displays, gain traction in the consumer market. Bendable OLED displays can wrap around furniture and other curved surfaces, which makes it

easy to imagine computing devices and accessories that meld with the human body. Perhaps the most anticipated wearable technology is Google's "Project Glass," augmented reality enabled glasses that operate via voice command, presenting the wearer with an information-laden view of their surroundings. Wearable devices are also proving to be effective tools for research because they use sensors to track data, such as vital signs, in real-time. Although wearable technology is not yet pervasive in higher education, the current highly functional clothing and accessories in the consumer space show great promise.

Other Trends

- The Digital Public Library of America (DPLA), launched in the spring of 2013, is designed to facilitate searching across the resources of America's libraries, archives and museums. As a centralized portal (http://dp.la), it provides access to open source materials in formats ranging from photographs, videos and oral histories – to - books and newspapers. Scholars can search across a large range of college libraries and other depositories with a sophisticated search engine. What is particular promising is Apps: DPLA bears close monitoring as a platform for the creation of new applications and tools that are dedicated to specific veins of research. In any case, some see DPLA as part of a movement – a backlash against vendors that assume ownership of information. In a word, it is a significant development in the world of information, but also serves as a catalyst to advocate for the need for free and open access to materials.
- In much the same vein as StraighterLine, many are advocating what they call "Do It Yourself" degrees. For example, D-I-Y U, by Anya Kamenetz, focuses on the crisis between the collegiate dream (of getting in school, graduating, getting a job, and doing what they want to do) and people actually getting to do that. This tension is being resolved by creative shortcut approaches. People are getting around the traditional path by looking at new uses of CLEP, community colleges and online collectives. The movement calls into question the value of the 4-year credential. These do-it-yourselfers take courses more purely out of motivation for the knowledge and skills that can be gained from the course itself rather than for the course's role in a more comprehensive academic program. (See article in August Popular Mechanics -- Raymond, 2013) This is referred to, by some, as the "coursification" of higher education.
- We may be seeing a trend where the credential comes more from the community of peers or patrons who use a tool or perform a service --as opposed to a gatekeeper providing the certification or degree. This phenomenon is referred to as Open Source Credentialing. (see openbadges.org, fiberr.com, mturk.com --Amazon's take on this).

Economy

Job Availability

While politicians make much of recent graduates moving back home, and while the jobs available may not be of highest quality, employment prospects for recent graduates may not be as bad as we are led to believe.

Unemployment rate of the civilian population 25 years and over

Educational Attainment	2008	2009	2010	2011	2012
High school graduate, no college	5.7	9.7	10.3	9.4	8.3
Some college or Associate degree	4.6	8.0	8.4	8.0	7.1
Bachelor's degree and higher	2.6	4.6	4.7	4.3	4.0

Source: Bureau of Labor Statistics (BLS, 2013a)

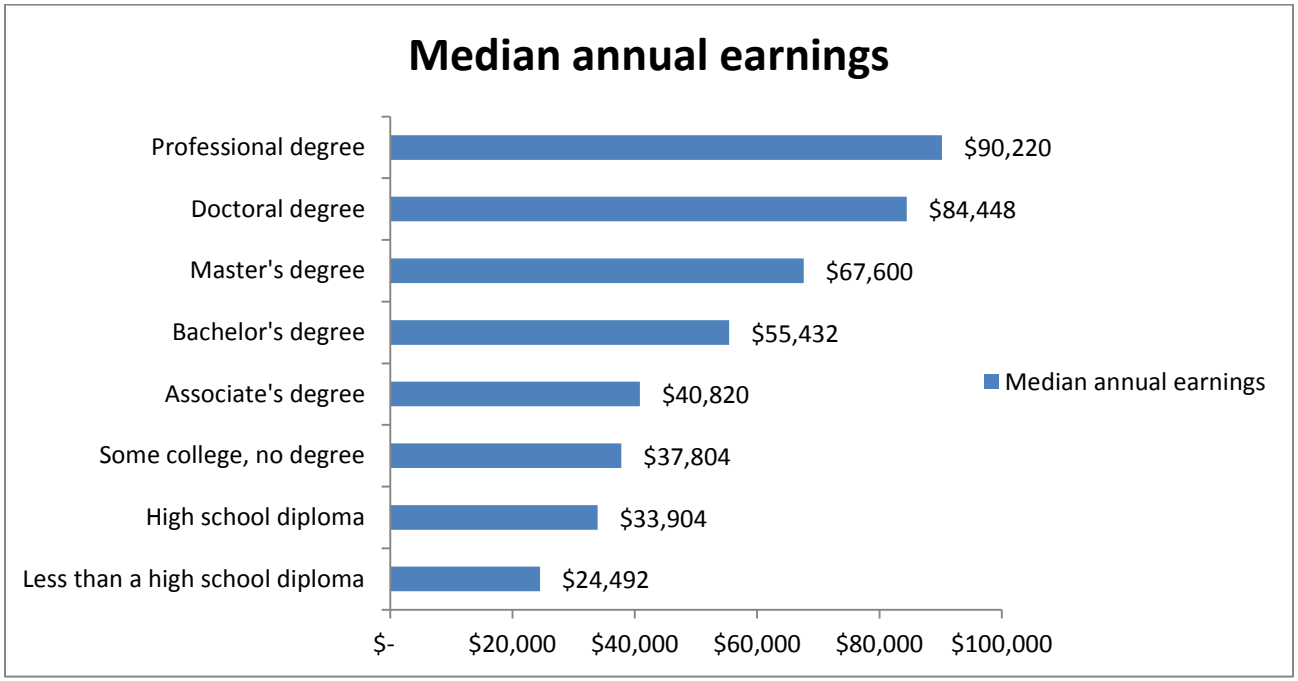
"Even when the jobless rate for college graduates was at its very worst in this business cycle, in November 2010, it was still just 5.1 percent. That is close to the jobless rate the rest of the work force experiences when the economy is good. Among all segments of workers sorted by educational attainment, college graduates are the only group that has more people employed today than when the recession started." (Rampell, 2013)

Of course, this high employment rate is a qualified success. Though unemployment rates are lowest for those possessing Bachelor's degrees or higher, college grads are not necessarily finding employment which requires a college degree. "Lower-wage occupations, with median hourly wages of $7.69 to $13.83, accounted for 21 percent of job losses during the retraction. Since employment started expanding, they have accounted for 58 percent of all job growth…Since 2001, employment has grown 8.7 percent in lower-wage occupations and 6.6 percent in high-wage ones. Over that period, midwage occupation employment has fallen by 7.3 percent."(Rampell, 2013)

"High-skilled people can take the jobs of middle-skilled people, and middle-skilled people can take jobs of low-skilled people," said Justin Wolfers, a professor of public policy and economics at the University of Michigan. "And low-skilled people are out of luck."(Rampell, 2013)

Higher Education still means higher pay

If we equate the value of higher education in economic terms, we can put some numbers on the "value" of a college degree. In 2012, U.S. adults 25 years and over who work full-time earn more annually with a higher degree across the board.



Source: Bureau of Labor Statistics (BLS, 2013b)

Economic Impact of Higher Education by Race

While the economic impact of higher education for African Americans is significant, it impacts them disparately. Note charts below:

	Median Weekly Income*			Unemployment Rate**		
	Whites	Blacks	Everybody	Whites	Blacks	Everybody
Doctorate	1731	1308	1624	2.2	6.5	2.5
Masters	1305	1122	1300	3.2	5.1	3.5
Bachelors	1094	892	1066	4.2	6.9	4.5
Associate	813	662	785	5.4	10.2	6.2
High School	885	548	652	7.5	13.4	8.3
Less than HS Diploma	482	408	471	11.4	20.4	12.4
Earn17_2012	Page 22	Page 40	Page 4	Page 31	Page 55	Page 7

*BLS Table A-17. Usual weekly earnings of employed full-time wage and salary workers1 by educational attainment , age, sex, race, and Hispanic or Latino ethnicity and Non-Hispanic ethnicity, Annual Average 2012

**BLS Table 10. Employment status of the civilian noninstitutional population by educational attainment, age, sex, race, and Latino and Non-Hispanic ethnicity, Annual Average 2012 (Source: Current Population Survey)

STEM Controversy

Currently, a debate exists concerning the reality of a STEM shortage (STEM referring to the group of workers in the *Science, Technology, Engineering and Mathematics* fields). While the perceived shortage is cited as reason for policy initiatives to increase STEM workers (for example, in June 2013, the House Judiciary Committee approved a High-Skilled Immigration Bill which to encourage foreign students in -- and job-seeking immigrants with -- advanced degrees in STEM fields (Rexrode & Collins, n.d.), some opponents of the bill attempt to debunk the supposed STEM shortage.

Hickey (2013) states that the real shortage is in capable American STEM workers because a general shortage in STEM workers would cause the demand for STEM workers (and their corresponding compensation) to rise and the unemployment rates of STEM workers to fall: He found that across various STEM disciplines, graduates are not finding STEM jobs at a rate that might be expected if there were a shortage. For graduates in the hard sciences (biology, physical sciences, math, agriculture and science technology), 22.5 percent have jobs in their particular discipline and 38.7 have a job in any STEM field. Health sciences graduates fare significantly better: 74.4% end up with jobs directly in their field and 76.2% in any STEM field. (Hickey, 2013)

Countering that argument, according to Rosen (2013), while about 5% of all jobs are classified as STEM jobs, STEM workers are being hired outside of these jobs at a considerable rate as their expertise in information processing and mathematical analysis is highly useful in non-STEM fields as well. Rosen also argues that the plateau of STEM wages is attributable to the general economic downturn and that "people who have STEM degrees out-earn those who do not, even when you control for their education level. This "STEM premium" has been growing for at least 15 years." (Rosen, 2013)

Politics aside, Rosen admits that the measures enacted by the High-Skill Immigration Bill should be a "stopgap" and that "the real focus must be on preparing young Americans for the jobs of the future."

Higher Education's Role in Economic Development

"In the past, colleges and universities focused on one main objective - educating students in different subject matters for different roles in society. In many cases, colleges and universities taught students and awarded degrees based upon the programs that had been in place for many years. The programs were driven by what the university wanted to teach and what students were interested in. More recently, many universities and colleges have recognized the need to become intimately involved in regional, state and national economic development initiatives. Part of this increased role in economic development efforts can be traced to economic development organizations doing a better job of reaching out to higher educational entities, and the desire of universities and colleges to help contribute to the 'public good' in a region, state or country." (Gigerich, n.d.)

We might no longer take for granted that America can only benefit from increased enrollment in and completion of higher education degree programs , which is a belief held firmly by policy makers: "If more Americans are educated, more will be employed, their collective earnings will be greater, and the overall productivity of the American workforce will be higher." (Geithner, 2012) But, can we assume that producing more

graduates in a particular field, even a 21st century field like computer technology, will lead to more employment in that field, higher salaries in that field or greater economic growth in the geographic area of the school which produces the graduates? (Gigerich, n.d.)

Some maintain that simply graduating students in fields needed in industries associated with desirable economic development doesn't translate automatically into economic development. Colleges have to go farther to fit into the industrial ecosystem. They do this through more direct collaboration and sharing of information to support innovations. Colleges, after careful analysis of the industrial ecosystem and regional economic goals, must develop a detailed strategic plan which leverages the university's resources and activities before they can be effective at economic development. (National Governors' Association, n.d.)

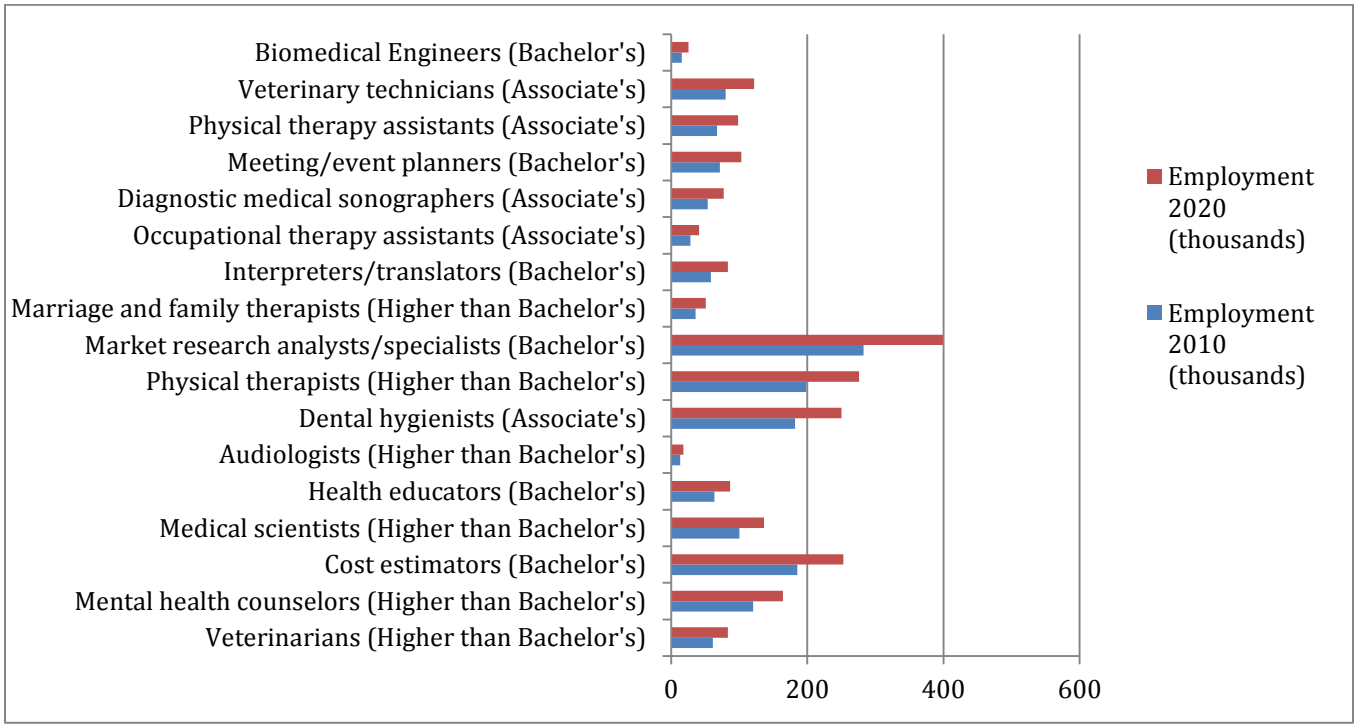
Fastest-growing jobs require college degrees

Nationwide

According to the Southern Regional Educational Board (SREB), "jobs that require college degrees will grow at a faster rate over time than those that do not."

Based on Bureau of Labor and Statistics data from February 2012, 17 of the 30 fastest growing occupations require a college education (associate's degree or higher).

Job Growth 2010-2020



(BLS, 2012)

Fastest-Growing jobs

Table 1. Occupations with the fastest growth 2010-2020 (median wage given for May 2012)

Occupation	# new jobs (thousands)	% change	Median wage/hr	Education/training category
Personal Care Aides	607	70.5	9.57	Short-term on-the-job training
Home Health Aides	706.3	69.4	10.01	Short-term on-the-job training
Biomedical Engineers	9.7	61.7	41.81	Bachelor's degree
Helpers: Brick-, Block-, and Stonemasons, Tile & Marble	17.6	60.1	13.57	Short-term on-the-job training
Helpers—Carpenters	25.9	55.7	12.29	Short-term on-the-job training
Veterinary Technologists and Technicians	41.7	52	14.56	Associate's degree
Reinforcing Iron and Rebar Workers	9.3	48.6	22.07	High school diploma or equivalent
Physical Therapist Assistants	30.8	45.7	25.08	Associate's degree
Helpers:Pipelayers, Plumbers, Pipefitters, Steamfitters	26.3	45.4	12.82	High school diploma or equivalent
Meeting, Convention, and Event Planners	31.3	43.7	22.02	Bachelor's degree
Diagnostic Medical Sonographers	23.4	43.5	31.66	Associate's degree
Occupational Therapy Assistants	12.3	43.3	25.6	Associate's degree
Physical Therapist Aides	20.3	43.1	12.91	High school diploma or equivalent
Glaziers	17.7	42.4	18.08	High school diploma or equivalent
Interpreters and Translators	24.6	42.2	21.84	Bachelor's degree
Medical Secretaries	210.2	41.3	15.07	High school diploma or equivalent
Market Research Analysts and Marketing Specialists	116.6	41.2	28.99	Bachelor's degree
Marriage and Family Therapists	14.8	41.2	22.44	Master's degree
Brickmasons and Blockmasons	36.1	40.5	22.33	High school diploma or equivalent
Physical Therapists	77.4	39	38.39	Doctoral or professional degree
Dental Hygienists	68.5	37.7	33.75	Associate's degree
Bicycle Repairers	3.7	37.6	11.61	High school diploma or equivalent
Audiologists	4.8	36.8	33.52	Doctoral or professional degree
Health Educators	23.2	36.5	23.46	Bachelor's degree
Stonemasons	5.7	36.5	17.96	High school diploma or equivalent
Cost Estimators	67.5	36.4	28.3	Bachelor's degree
Medical Scientists, Except Epidemiologists	36.4	36.4	37.01	Doctoral or professional degree
Mental Health Counselors	43.6	36.3	19.27	Master's degree
Pile-Driver Operators	1.5	36	23.31	High school diploma or equivalent
Veterinarians	22	35.9	40.61	Doctoral or professional degree

Table 2. Occupations with the largest numerical growth 2010-2020 (median wage given for May 2012)				
Occupation	# new jobs (thousands)	% change	Median wage/hr	Education/training category
Registered nurses	711.9	26	31.48	Associate's degree
Retail salespersons	706.8	16.6	10.15	Short-term on-the-job training
Home health aides	706.3	69.4	10.01	Short-term on-the-job training
Personal care aides	607	70.5	9.57	Short-term on-the-job training
Office clerks, general	489.5	16.6	13.21	High school diploma or equivalent
Combined food preparation and serving workers, including fast food	398	14.8	8.78	Short-term on-the-job training
Customer service representatives	338.4	15.5	14.7	High school diploma or equivalent
Heavy and tractor-trailer truck drivers	330.1	20.6	18.37	High school diploma or equivalent
Laborers and freight, stock, and material movers, hand	319.1	15.4	11.49	Short-term on-the-job training
Postsecondary teachers	305.7	17.4	26.92*	Doctoral or professional degree
Nursing aides, orderlies, and attendants	302	20.1	11.53**	Postsecondary non-degree award
Childcare workers	262	20.4	9.38	High school diploma or equivalent
Bookkeeping, accounting, and auditing clerks	259	13.6	16.91	High school diploma or equivalent
Cashiers	250.2	7.4	9.12	Short-term on-the-job training
Elementary school teachers, except special education	248.8	16.8	20.48*	Bachelor's degree
Receptionists and information clerks	248.5	23.7	12.49	High school diploma or equivalent
Janitors and cleaners, except maids and housekeeping cleaners	246.4	10.7	10.73	Short-term on-the-job training
Landscaping and groundskeeping workers	240.8	20.9	11.33	Short-term on-the-job training
Sales representatives, wholesale and manufacturing, no tech/science	223.4	15.6	26.07	High school diploma or equivalent
Construction laborers	212.4	21.3	14.42	Short-term on-the-job training
Medical secretaries	210.2	41.3	15.07	High school diploma or equivalent
First-line supervisors of office and administrative support workers	203.4	14.3	23.72	High school diploma or equivalent
Carpenters	196	19.6	19.2	High school diploma or equivalent
Waiters and waitresses	195.9	8.7	8.92	Short-term on-the-job training
Security guards	195	18.8	11.52	High school diploma or equivalent
Teacher assistants	191.1	14.8	9.60*	High school diploma or equivalent
Accountants and auditors	190.7	15.7	30.55	Bachelor's degree
Licensed practical and licensed vocational nurses	168.5	22.4	19.97	Postsecondary non-degree award
Physicians and surgeons	168.3	24.4	***	Doctoral or professional degree
Medical assistants	162.9	30.9	14.12	High school diploma or equivalent

Table 3. Occupations with the fastest decline 2010-2020 (median wage given for May 2012)				
Occupation	# jobs lost (thousands)	% change	Median wage/hr	Education/training category
Shoe Machine Operators and Tenders	1.7	-53.4	11.69	High school diploma or equivalent
Postal Service Mail Sorters, Processors, and Processing Machine Operators	68.9	-48.5	25.52	High school diploma or equivalent
Postal Service Clerks	31.6	-48.2	25.53	High school diploma or equivalent
Fabric and Apparel Patternmakers	2.1	-35.6	18.58	High school diploma or equivalent
PostMaster's and Mail Superintendents	6.8	-27.8	30.31	High school diploma or equivalent
Sewing Machine Operators	42.1	-25.8	10.23	Short-term on-the-job training
Switchboard Operators, Including Answering Service	33.2	-23.3	12.2	High school diploma or equivalent
Textile Cutting Machine Setters, Operators, and Tenders	3.3	-21.8	11.56	High school diploma or equivalent
Textile Knitting and Weaving Machine Setters, Operators, and Tenders	4.1	-18.2	12.76	High school diploma or equivalent
Semiconductor Processors	3.8	-17.9	15.88	Associate's degree

- Table1: Table 1.3 Fastest growing occupations, 2010 and projected 2020 - http://www.bls.gov/emp/ep_table_103.htm (and May 2012 National Occupational Employment and Wage Estimates United States - http://www.bls.gov/oes/current/oes_nat.htm)
- Table 2: Table 1.4 Occupations with the largest job growth, 2010 and projected 2020 - http://www.bls.gov/emp/ep_table_104.htm
- Table 3: Table 1.5 Fastest declining occupations - http://www.bls.gov/emp/ep_table_105.htm
- Data in Education/training category column **of all three job tables** comes from Table 1.12 Education and training categories by detailed occupation - http://www.bls.gov/emp/ep_table_112.htm

For more information on specific degrees of interest to Brenau, go to very searchable site: http://www.bls.gov/ooh/

Employment losses in the South and in Georgia

The nation's unemployment rates rose dramatically from 2007 to 2012*. The unemployment rate went up from 4.3 percent to 7.7 percent in the South. (Marks, 2013, p23) In Georgia, it went from 4.6 percent to 9.0 in the same time period. (Source: US Bureau of labor Statistics: online database 2013 – note page 23 of SREB Fact Book 2013.)

SECTORS (Nonagricultural Employment)

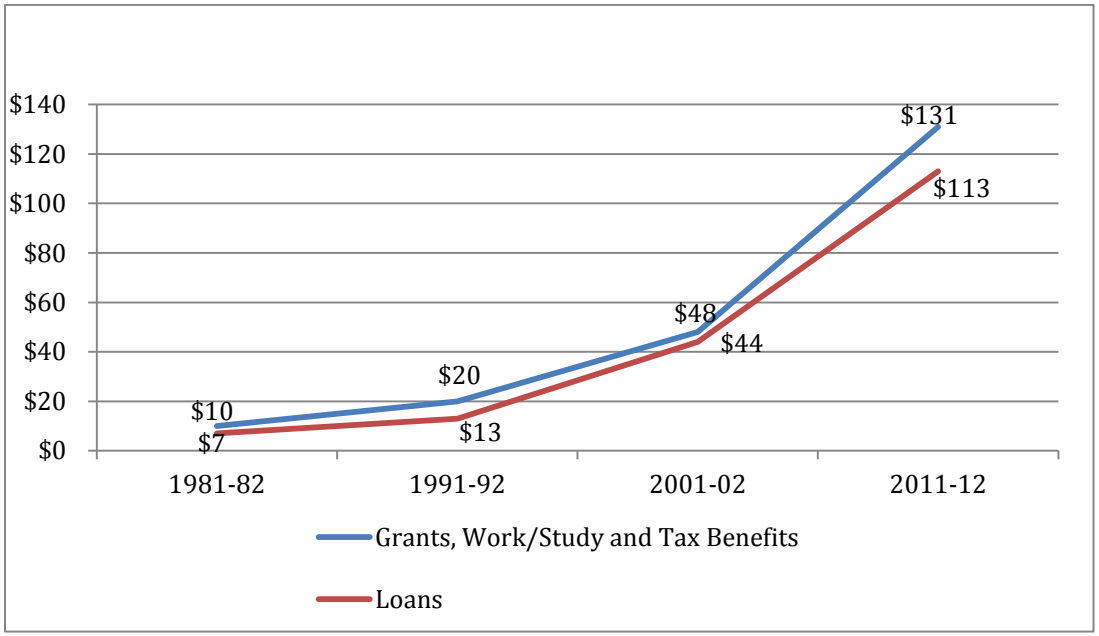
		Total	Mining, Logging and Construction	Manufacturing	Trade, Utilities & Transportation	Information	Financial, Professional & Business Services	Education & Health Services	Hospitality & Other Services	Government
2011 Employment (thousands)*	Southern States	46,893	2,670	3,879	9,167	823	8,761	6,512	6,728	8,355
	Georgia	3,880	155	350	821	97	756	499	533	669
% Change 2006-2012**	Southern States	-2.2	-22.1	-18.4	-3.9	-13.6	-1.0	13.0	1.4	3.9
	Georgia	-5.1	-33.1	-21.7	-5.8	-12.7	-3.4	12.7	-1.9	1.5

*(Marks 2013, Page 23)

**(Marks 2013, Table 14)

Debt

While college may increase chances of employment – and, on average, correlate with better salaries – the debt students leave with suppresses the positive contribution of higher education to both **individuals** and the **economy**. Because of debt, recent students postpone decisions about starting businesses, buying houses, starting families and furthering their education.



(Marks, 2013, page 105)

While the amounts of debt are startling, student borrowing has actually dropped for the first time in decades. "Nationwide, total borrowed amounts (loans) fell below total financial aid (grants/work-study/tax benefits) in 2009-10. In that year, for the first time since 1982-83, the amounts loaned declined. … In 1981-82, students or their parents borrowed $7 billion and received $10 billion in financial aid. By 2011-12, borrowing was up to $113 billion, and financial aid totaled $131 billion." (Marks, 2013)

Even though the debt amounts may be dropping, the number of borrowers continues to climb. "At public four-year institutions in 2010-11, 50 percent of these freshmen in the SREB region and 53 percent in the nation took out loans — averaging $6,100 and $6,200, respectively. In 2005-06, the SREB region's percentage was 8 percentage points lower, and the loan average was $2,100 lower." (Marks, 2013)

To get an idea of the funding gap which students and families currently face, "nationwide, the average one-year cost for full-time, first-time degree- or certificate-seeking undergraduates paying in-state or in-district tuition at a public four-year college or university in 2010-11 was $19,100" (Marks, 2013) with only 46.1% of that cost being covered by scholarships or grant aid. For SREB states, the average cost was $17,900 with 40.8% covered by scholarships or grant aid. Georgia students in this cohort paid an average of $18,500 with 43.2% covered by scholarship or grant aid, ranking Georgia as the 6th most expensive SREB state while it's students received the 3rd highest amount of scholarship and grant aid. (Marks, 2013 -- Figures in the final paragraph of this section taken from SREB Fact Book, 2013, page 106: Chart: "What Students and Their Families Pay")

Big Picture Changes in our Economics

Various events worldwide (Occupy Wall Street, the Tea Party, the Arab Spring, uprisings in Brazil, Greece, etc.) have some speculating that protests may be related. While some say that the common thread is distrust of "elites," many of these protests focus on concentration of wealth. For example, in light of real and perceived income inequality and the lack of accountability for consequences caused by big banks, we are witnessing various calls for divestment, and regulation and "democratizing capital". (Alperovitz, 2013) ("Democratizing capital" would look like distributed ownership of firms -- as we see in power coops, in credit unions, land trusts, and various forms of worker owned companies -- yet would avoid statism which is also a source of unrest. In any case, there is focus on new "ownership styles" during this time.)

What this ultimately looks like for higher education, we will have to wait and see. At the minimum, colleges are asked to examine where they invest their endowment, disclose patronage of all kinds including research and sponsored programs, etc. At the extreme fringe, there is even discussion of "mass ownership" of higher education (e.g., by the professors themselves) in order "to offer higher education under co-operative service paradigms" and "away from capitalist and state control." (Professional Society of Academics, 2013) While this vision will never be fulfilled, more likely, there will be pressure for disclosure and transparency on endowment investments, trustee influence, etc.

Other Economic Trends Impacting Higher Education

Per Capita Income Source: SREB Fact Book 2013, pages 20

	Per Capita Income 2011	Change				Percent of US Average			National Rank		
		Actual		Adjusted for Inflation							
		2006-2011	2010-2011	2006-2011	2010-2011	2006	2010	2011	2006	2010	2011
Southern States	38,655	3,546	1,523	3,957	1,571	93.1	93.0	92.8	--	--	--
Georgia	36,104	2,043	1,357	2,280	1,400	90.3	87.0	86.7	29	39	40

Source: SREB Fact Book 2013, pages 20

Median Annual Income and Poverty Rate Source: SREB Fact Book 2013, pages 21-22

	Median Annual Income 2011	Percent Change		Percent of US Average			National Rank			Overall Poverty Rates			
		2001 to 06	2006-2011	2001	2006	2011	2001	2006	2011	2011	National Rank		Percent Change 2006 to 2011
											2006	2011	
Southern States	42,590	8.8	7.5	86.2	82.2	85.1	--	--	--	16.6	--	--	2.2
Georgia	45,973	15.9	-6.8	100.8	102.4	91.8	22	19	36	18.5	17	6	5.2

(NATURAL) ENVIRONMENT

"…no institutions in modern society are better situated and none more obliged to facilitate the transition to a sustainable future than colleges and universities" (Orr, 2002, p.96).

Higher Education has the biggest carbon footprint of any single societal institution.[1] While the footprint issue is but one sustainability action higher education is expected to take (certainly society will expect also instruction, research and public service roles, as well!), keeping its own carbon house in order will remain a key pressure on higher education:

- Colleges are under scrutiny for "green washing" -- only taking small-scale and gradual changes that are "far from adequate response to the urgent sustainability imperative." Institutions are accused of "Relying on small-scale 'club' activities establishing demonstrations and raising awareness is unlikely to lead to permanent change" (Bekessy, Samson, & Clarkson, 2007).
- Higher education is being eyed for regulation: Currently, all public institutions in California must monitor emissions. Also:
  - In 2009, the Environmental Protection Agency (EPA) proposed the Mandatory Greenhouse Gas Reporting rule GHGRP, which would require any U.S. entity emitting more than 25,000 metric tons of CO2-equivalent (mTCO2e) (thus becoming a "regulated entity") to report their emissions annually to a centralized federal registry. Campuses with their own power plants are thus regulated.
  - In July 2011, British Columbia's Public Sector achieved mandated carbon neutrality for calendar year 2010—a significant achievement and global first. The initiative covered a range of public sector organizations...[including] post-secondary institutions. [Note particularly SMARTTool methods of emissions measurements http://www.env.gov.bc.ca/cas/mitigation/pdfs/Methodology_for_Reporting_BC_Local_Government_GHG_Emissions.pdf and findings of college sector pp. 11-13 of Engagement Report] (Climate Action Secretariat of British Columbia, 2011).
  - The UK government plans to link cutting emissions to funding agreements for higher education. (St. Arnaud, Smarr, Sheehan, & DeFanti, 2009)

[1] "In 2005, U.S. institutions of higher education accounted for approximately 121 million MTCO2E, or nearly 2% of total annual U.S. GHG emissions. For reference, these emissions are comparable to approximately one-quarter of those from the state of California." (Sinha et al.)

Some of these examples come from beyond our boundaries. The regulations of other countries, however, may serve as examples (inspiration) for our own policymakers. Not only that, increasingly regulations extend to outside firms doing business in those countries. Additionally, the impact of emissions is indeed international. In any case, as far as government policy goes, it will likely require objective measurement of emissions.

Measurement of Greenhouse Gas Emissions

Measurement of GHG emissions is already being done in a systematic way. The American College and University President's Climate Commitment ACUPCC, for example, requires "signatory" schools, (of which there are currently 677 and some 900 additional non-signatory schools that also post to this inventory) a Greenhouse Gas report. Those participating – either as signatories or as non-signatories – use GHG "inventories" (such as CA-CP calculator) for determining emissions that are compatible with the Greenhouse Gas Report (ACUPCC, 2012). The report requires calculation of such things as co-generation, CO2 emissions from electricity purchases (including calculation of power mix from utility), natural gas purchases, and emissions from business air travel, university-owned vehicles, commuters, and even emissions from solid waste and other such "Scope 3" emissions. The calculator also accommodates recording of mitigation efforts, such as purchase of carbon offsets, renewable energy certificates, and sequestration of carbon by purchase of land, etc. Institutions are additionally asked to contextualize this with "normalization" data – such as enrollment, physical plant size, etc.

In addition to keeping tabs of GHG emissions – direct and indirect -- signatories (and non-signatory participants) must give a date as to when they will accomplish total "climate" neutrality and specify the strategies for attaining it.

Some small institutions have accomplished it. Colby College (Maine) is now the fourth higher ed institution—and the largest—to have gone carbon neutral. Along with Colby, which has just over 1,800 students, College of the Atlantic (Maine), Green Mountain College (Vt.), and University of Minnesota at Morris have achieved carbon neutrality. (Williams, 2013)

"We estimate that 12 to 15 additional higher education institutions will reach carbon neutrality by 2018 and more than 400 by 2050," says David Hales. "Smaller schools have the advantage as there are … less moving parts to control." (Williams, 2013)

Factors other than Greenhouse Gas emissions

In addition to the GHG measurement, there is also pressure from some corners -- associations focused on campus sustainability -- to report "best practices". The "Sustainability Tracking, Assessment & Rating System " STARS – part of an initiative of the Association for the Advancement of Sustainability in Higher Education (AASHE) – is perhaps the industry standard for such an inventory. It includes every aspect of campus sustainability possibilities: **Co-Curricular Education** including Clubs, Events, themed Semesters**;** **Curriculum** including Sustainability-Related Courses, Sustainability Learning Outcomes, Undergraduate Program in Sustainability, Graduate Program in Sustainability, Sustainability Immersive Experience, Sustainability Literacy Assessment, Incentives for Developing Sustainability Courses, etc.; **Research; Buildings** including retrofits, LEED certification**;** etc. **Climate Plans** charting activities and goals; **Dining Services; Grounds; Purchasing; Transportation:** Campus Fleet (e.g. which use alternative fuels), Student Commute Modal Split, Employee Commute Modal Split, Bicycle Sharing, etc.; **Waste:** Waste Reduction, Waste Diversion, Electronic Waste Recycling Program, etc.; **Water:** Water Consumption; Waterless Urinals; Building Water Metering; Non-Potable Water Usage; Xeriscaping; etc.; **Coordination and Planning**: Sustainability Coordinator; Integration with Strategic Plan and Physical Campus Plan; etc.; **Diversity, Access, and Affordability**: **Human Resources**: e.g., Sustainability in New Employee Orientation; Employee Sustainability Educators Program; Socially Responsible Retirement Plan, etc.; **Public Engagement:** E.g., Community Sustainability Partnerships…; and **Investments.**

Focus on Investments

Students on some campuses are engaging in divestment drives focused particularly at coal-powered utilities. In 2011, UNC Chapel Hill "was one of just a handful of divestment drives in the nation. Now, more than 300 student-led campaigns are calling for divestment at colleges and universities across the country… demanding divestment from all fossil fuel companies."(Jarvis, 2013b)

> What eventual impact divestment may have on fossil fuel companies is open to debate. Climate activists like Bill McKibben say that the goal is largely political--stripping the companies of the clout that brings them economic and regulatory advantages (Jarvis, 2013b) [2]

Divestment drives appear to be primarily symbolic, but the drives are bringing academic benefits of all kinds, requiring students to dig deeply into the math and science of the issue – not just chemistry and biology but also economics and political science. In any case, "Students, alumni, and faculty are now asking administrators to really put their money where their mouths are. All the beautiful pictures on a college's website of its sustainability efforts won't mean very much if it's deeply in debt to the fossil fuel industry."(Jarvis, 2013a) We'll watch to see if the groups at UNC convince trustees to divest of Duke Energy. As mentioned in Economy Section above, the divestment issue –here associated specifically with the environment – may actually be part of a larger grassroots movement related to disparity of capital ownership and to larger issues of corporate control.

Student-Led Activities

Perhaps the **big buzz** in campus sustainability these days is all things "student-led" (often interchangeably used with "hands-on"). From divestiture movements (see above), to protests at EPA, to slow food "non-clubs", to designing and building solar homes, to planting edible gardens, to student-led (yes, student-led) campaign for institutional green fees! (Herman Miller Inc, 2013) "Students keep sustainability at the forefront of their campuses as they work cooperatively with faculty and staff to promote sustainability" and student groups maximize people power. "From research and policy implementation to curriculum development and systems audits, initiating a comprehensives eco-strategy takes significant human resources." (Motley, 2007) Indeed, the "sustainability" of various green initiatives is dependent on students. Sometimes students even organize their own "summits" to help energize the efforts of the institutions' officially-sanctioned offices and centers. (Fiorini, Goldner, & Payne, 2013)

[2] To explain this further: "[Hoping to have] the same effect divestment had on apartheid in South Africa: a clear statement from the elites of society that they understand that the fossil fuel industry is now a rogue industry and they don't want to be associated with it. There will be other people who will buy their stock--for the time being. But this will begin to erode the political power on which they depend. The only reason that the fossil fuel industry is a good investment at all is that it is the only industry on earth that gets to put out its waste for free. And the only reason it gets to do so is because of its political power. So we're trying our best to take some of that away (Jarvis, 2013a)."

Politics

> …concerns by lawmakers and the general public about college affordability and student outcomes will amplify current efforts by higher education leaders (AASCU, 2013).

President Obama's Plan

As part of a larger "Better Bargain for the Middle Class" initiative, the President outlined over the summer a "new agenda to combat rising college costs and make college affordable for American families. His "Making College More Affordable" plan will measure college performance through a new ratings system so students and families have the information to select schools that provide the best value." It is proposed that Congress can ultimately "tie federal student aid to college performance so that students maximize their federal aid at institutions providing the best value. The President's plan will also take down barriers that stand in the way of competition and innovation, particularly in the use of new technology, and shine a light on the most cutting-edge college practices for providing high value at low costs." The President also rolled out a "Pay As You Earn" plan that caps loan payments at 10 percent of income and is directing the Department of Education to ramp up its efforts to reach out to students struggling with their loans to make sure they know and understand all their repayment options."(Office of the Press Secretary, 2013)

Colleges will be rated specifically on Access (probably, percentage on Pell Grant), Affordability (average tuition, scholarships and loan debt) and Outcomes (including retention rates, graduate earnings, and advanced degrees attained by graduates.) The purpose of the rating is ultimately to steer federal financial aid (grants and loans at reduced rates) toward colleges that provide the best value.

State Scholarships

Nationwide, the student demand for state aid continues to outpace available funds in state programs. (AASCU, 2013)

> …the College Board, using NASSGAP data, estimates state grant aid per FTE undergraduate student has decreased by about 2 percent from five years ago, after adjusting for inflation (College Board, 2013).

While Hope has not radically changed this year, this demand-outpacing-supply dynamic is still at issue, which is evidenced in the state's recent elimination of eligibility for large groups for HOPE for diplomas and certifications – which previously had open eligibility. The state will continue to plan reductions to save the program.

GA Publics

Even though a consolidation involving eight[3] public institutions in Georgia impacted to nearby institutions, the offerings of majors by other institution in our immediate environment wont' change a lot. Please see chart below (continued on next page) showing offerings of undergraduate major offerings at UNG Dahlonega and the UNG Gainesville Campus.

	Applied Envrmntl /Spatial Analysis	Arabic	Art	Art - Film	Art - Studio	Art Ed	Art Marketing	Athletic Training	Biology	Business	Business - Acct	Business - Finance	Business - HR Mgmt	Business - Mgmt	Business - Mktg	Chemistry	Chinese	Computer Info Sys	Computer Sci	Conflict Res & Lgl St	Criminal Jstc	Criminal Jstc - Frnscs	Dance
UNG - Dahl		BA	BA	BA	BA	BS	BS	BS	BS		BBA	BBA		BBA	BBA	BS	BA	BS	BS		BS	BS	
UNG - Gns	BS								BS		BBA	BBA		BBA									
Brenau					BFA	BFA			BS	BBA	BBA		BBA		BBA					BA			BA

[3] Gainesville State College and North Georgia College & State University; Middle Georgia College and Macon State College; Waycross College and South Georgia College; and Augusta State University and the Georgia Health Sciences University.

	Dance Ed	Early Childhood Ed	Early Chld Care & Ed	Engineering Dual Deg (Chem, Math, Phys)	English	English - Lit, Writing	Fashion Design	Fashion Merch	French	General St	Health Sci	History	Humn Srvc - Grntlgy	Hman Srvc - Int Dscpl	Intl Affairs	Liberal Arts	Mass Comm	Mathematics	Middle Grades Ed	Music	Music Ed	Nursing	Nursing - RN to BSN
UNG - Dahl		BS		BS	BA	BA			BA	BS		BA			BA			BS	BS	BA	BS	BSN	
UNG - Gns		BS	BS		BA								BA	BA				BS					
Brenau	BA	BS			BA		BFA	BA		BS	BS	BA[1]				BA	BA		BS	BA	BA	BSN	BSN

	Org Leadership	Paralegal Studies	Physical Ed	Physical Ed - Exrcs Sci	Physics	Political Sci	Pre-OT (Hlth Sci, Psy)	Pre-Phys Asst	Psychology	Residential Planning	Sociology	Spanish	Spanish - Business	Special Ed	Tech Mgmt	Theatre	Theatre - Acting	Theatre - Musical	Theatre - Dsgn & Tech
UNG - Dahl			BS	BS	BS	BS/BA			BS		BS	BA	BA	BS[2]					
UNG - Gns		BAS							BS						BAS				BFA
Brenau	BA					BA[1]	BS	BS	BS	BA				BS		BA	BFA	BFA	BFA

For the most part, the offerings are complementary, and in one or two cases (e.g, set design and technology), even symbiotic.

Immigration

Undergraduates:

Although unlikely, if the "Border Security, Economic Opportunity, and Immigration Modernization Act of 2013" passes the US House of Representatives, it is widely considered a "win" for higher education.

> For the first time in several years, 2013 may present a rare window of opportunity for Congress to come together in a bipartisan manner around comprehensive immigration reform. Potential federal legislation could include elements of the DREAM Act (Development, Relief, and Education for Alien Minors), first introduced more than a decade ago, which would provide conditional permanent residency for undocumented residents who meet certain criteria, including completion of two years of college or military service.

"Dreamers" -- people brought to the United States illegally before the age of 16 -- who meet the criteria would be eligible for student aid. (Gardner, 2013)

Graduates:

Another aspect of this bill with impact for higher education is the "green-card" section. Foreigners who earned Ph.D.'s at American universities would be eligible for green cards, while foreign students who completed master's degrees or Ph.D.'s in science, technology, engineering, or mathematics (the STEM fields) could petition for a card. These advanced degrees will automatically garner green-cards.

In addition, the bill would also keep colleges exempt from the national cap on H-1B visas, allowing them to temporarily employ researchers who are not citizens. It also would cut and limit student-visa fees (Weinberg, 2013).

Higher-education lobbyists drew support from businesses in Silicon Valley as well as the U.S. Chamber of Commerce, which pushed to expand citizenship eligibility for high-skilled workers

Competency-Based and Online Education

We can expect to see pressure to grant credit for work accomplished on novel platforms, such as MOOCs (see above.)

> State policy officials will also pay closer attention to how the fast growing array of free and fee-based online courses can be optimally packaged into competency-based and credit-bearing credentials and which can prove to be a sustainable business model for institutions. An example of this are the 14 universities of the Pennsylvania State System of Higher Education (PASSHE), which have formed an innovative collaboration with LearningCounts.org and the Council for Adult and Experiential Learning (CAEL). Together, this group will ensure that prospective students receive credit for college-level learning they have gained through their work, military or other prior learning experiences, including completion of online instruction such as Massive Open Online Courses (MOOCs). (Marshall, 2012) The expansion of online and competency-based educational delivery models will help push the boundaries of lower-cost higher education. This has been a current focus of many policymakers, including the governors of Texas and Florida, who recently called on the public colleges in those states to finds ways to offer bachelor's degrees for as little as $10,000. (AASCU, 2013) [As mentioned, Georgia Tech has announced that for $7,000, students can get a degree in computer science through mass courses they author.]

It will be interesting to see if traditional colleges will lose students to institutions who attempt to offer whole degrees through mass open platforms.

Guns on campus

18 states introduced campus gun legislation in 2011 and 16 states introduced legislation in 2012. (AASCU, 2013) Although debated, Georgia has not passed a bill allowing guns on campuses. One way or the other, Brenau and other private colleges will be able to ban weapons at their own option.

Consumer Protection Involving For-Profit Colleges

Even not-for-profit institutions will operate in a climate of more intense scrutiny due to ongoing investigations – and revelations -- of the for-profit sector.

Allegations of fraud and abuse in the for-profit college industry continued to plague the sector in 2012. U.S. Senator Tom Harkin (D-IA) concluded a two-year congressional investigation of for-profit colleges' practices and performance in July 2012. The investigation found that for-profit colleges have much higher tuition rates than community colleges and public universities; comparatively low college completion rates; higher levels of student debt and loan defaults; and a history of engaging in misleading student recruitment tactics. Within the context of the Higher Education Act reauthorization, the Senate will continue to investigate and hold hearings involving practices and allegations of consumer fraud and abuse by institutions of higher education, in particular, for-profit colleges. Outside of actions on Capitol Hill, states have revisited their oversight structure and launched investigations into the practices of for profit-colleges. According to the NCSL, 20 states introduced 44 bills in 2012 concerning for-profit higher education. California Watch, a nonpartisan watchdog group, has detailed over two dozen state attorneys general investigations into the practices of this sector. (AASCU, 2013)

Longitudinal Data Systems

Private and public institutions of higher education in Georgia are asked to contribute data to that GA Awards program – part of Georgia's unique involvement in the Race to the Top. The Registry collects individual data about students throughout their lifetimes. Institutions need to have concern about privacy of their students, not to mention the larger issues of their role in accumulating data at the government level which could be abused.

OTHER MISCELLANEOUS TRENDS

Complaints about Overhead and Organizational Priorities

Increasingly, especially as costs continue to increase, higher education is subject of criticism for being top-heavy. One book making waves is *The Fall of the Faculty*, in which Benjamin Ginsberg explains that until very recently, American universities were led mainly by their faculties, which viewed intellectual production and pedagogy as the core missions of higher education. Today, however, "deanlets"--administrators and staffers often without serious academic backgrounds or experience--are setting the educational agenda. He discusses the fallout of "rampant administrative blight that now plagues the nation's universities." In the past decade, universities have added administrators and staffers to their payrolls every year even while laying off full-time faculty in increasing numbers--ostensibly because of budget cuts. In a further irony, many of the newly minted--and non-academic--administrators are career managers who downplay the importance of teaching and research, as evidenced by their tireless advocacy for a banal "life skills" curriculum. Consequently, students are denied a more enriching educational experience--one defined by intellectual rigor. Ginsberg says that administrators have actually taken up grievances of minority groups and liberal activists as chess pieces in a game of politics. By embracing initiatives such as affirmative action, the administration gained favor with these groups and legitimized their own efforts to bolster power over the faculty. In sum, he believes that higher education and university policy is set by "bureaucrats" who do not know what is required for teaching and research (Ginzberg, 2011).

Changes that are provoking a great deal of anxiety and alarm – and potential

A recent Chronicle of Higher Education article, *The Future Is Now: 15 Innovations to Watch For* Steven Mintz predicts 15 innovations "that will alter the face of higher education over the next 36 months." **1: e-Advising** Sophisticated e-advising systems will monitor student engagement and degree planning, send out automated warnings, and signal faculty and academic advisers about impending trouble, thus helping ensure that students remain on a path to graduation. **2: Evidence-based pedagogy** Instructional design will be increasingly emphasize learning objectives, mastery of key competencies, and assessments closely aligned to learning goals.; **3: The decline of the lone-eagle teaching approach** Rather than designing foundational courses on their own, faculty members will work with colleagues and

instructional designers to develop simulations, animations, and assessment collaboratively. **4: Optimized class time** This shift will become more general as Web-enhanced, blended classes become the norm. **5: Easier educational transitions** High schools, community colleges, and four-year institutions will create early-college/dual-degree courses better aligned to the college curriculum. **6: Fewer large lecture classes** which will give way to a variety of models, including Web-enhanced hybrid classes, fully online courses, accelerated courses, and competency based modules. **7: New frontiers for e-learning** Student engagement in online learning will be encouraged by much higher levels of interaction through collaborative learning, as well as animations, educational gaming, immersive-learning environments, and hands-on simulations. **8: Personalized adaptive learning** Embedded remediation, personalized learning pathways, and instruction that responds to students' prior knowledge and misconceptions will become a key component in more and more courses. **9: Increased competency-based and prior-learning credits** Pressure to accelerate the time needed to get a degree and to demonstrate greater accountability for student learning will encourage institutions to provide credit for learning that takes place outside the regular curriculum, whether from MOOCs or from "real world" experience. **10: Data-driven instruction** Data analytics and learning "dashboards" will become commonplace, allowing faculty members to focus instruction to better meet student needs and to improve courses over time. These tools will also allow students to better monitor their own learning. **11: Aggressive pursuit of new revenue** Today, most online programs serve an institution's existing students, but over the next three years, a significantly higher number will pursue nonmatriculated students at all levels. This rush will result in bone-crushing competition, so only a few of these efforts will succeed. **12: Online and low-residency degrees at flagships** This could prove to be severely disruptive to many less well-known institutions. **13: More certificates and badges** Alternate forms of credentialing will become increasingly common. Some students might prefer a certificate in business, for example, from a more prestigious institution, rather than a business minor from their home institutions. **14: Free and open textbooks** One way to trim the cost of higher education is to embrace free online textbooks and online instructional environments. **15: Public-private partnerships** Success in online instruction requires a stack of support services, including strategic enrollment plans, marketing and academic support, and software, which most institutions can't deliver on their own. Already, campuses that want to rapidly ramp up their online offerings have proved willing to trade 50 percent of tuition revenue for a decade in exchange for such services. (Mintz, 2013)

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