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SERU Consortium Research Paper*

**RESEARCH UNIVERSITY SPACES:
The Multiple Purposes of an Undergraduate Education****

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ABSTRACT

Students, faculty, and the public expect undergraduate education in research universities to contribute to multiple developmental purposes. While academic purposes remain pre-eminent, a singular focus on knowledge and skills development is no longer adequate. Based on data and analysis from the Student Experience in the Research University (SERU) Undergraduate Survey, this essay identifies and discusses five widely endorsed purposes of student development during the college years: social, personal, academic, civic, and economic. It also identifies the characteristics of classroom and extra-curricular settings that contribute to the achievement of these purposes. In turn, the resulting SPACES model provides a theoretical framework for SERU intended to guide future survey design and research.

Keywords: Student Experience, Research Universities

Introduction

This essay offers a multi-dimensional framework for understanding the purposes of an undergraduate education. It puts into crystallized form the structure of the Student Experience in the Research University (SERU) Survey, which has served as a vehicle for understanding the undergraduate student experience, but until now without an explicit theoretical grounding.

With the decline of character development as a competing objective, academic knowledge and skills development became the central focus of post-world War II approaches to the undergraduate experience, accompanied by a secondary concern for civic involvement. For mid-20th century Americans, the research university provided, above all, the specialized skills required for a knowledge-based society. The Harvard Red Book focused on the role of the University in helping students "to think effectively, to communicate thought, to make relevant judgments, to discriminate among values" (Buck et al. 1945, p. 65). Clark Kerr (1962) famously described the university as "a city of intellect" and Daniel Bell (1973) characterized it as "the axial institution" of a knowledge-based post-industrial society. The idea that the university was fundamentally about academic knowledge and the classroom experience found its way into the first large-scale surveys of undergraduates. During its first decade, for example, the National Survey of Student Engagement (NSSE) included five benchmarks, four of which focused mainly on academic skills development (academic challenge, active and collaborative learning, faculty-student interaction, and enhanced educational experiences) and one of which focused on the campus environment of support for learning (NSSE 2000).¹

* Student Experience in the Research University ([SERU](#)) Consortium is an academic and policy research collaboration based at Center for Studies in Higher Education at the University of California – Berkeley (CSHE) working in partnership with the University of Minnesota, the International Graduate Insight Group Ltd (i-graduate), the Higher School of Economics – Moscow, and member universities.

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Undoubtedly the development of undergraduates' academic skills and knowledge remains the central purpose of the research university's engagement with undergraduates. Yet when we consider the full range of developmental changes we hope universities will foster, we can see that a singular focus on intellectual development is too narrow. The broader perspective I describe here encourages research universities to be accountable for addressing several dimensions of learning and experience. Specifically, I conceptualize the undergraduate experience as incorporating five fundamental purposes: (1) growth in academic knowledge and cognitive skills, (2) personal development, (3) social skills development, (4) preparation for economic opportunities and careers, and (5) civic engagement. I add a sixth dimension, institutional settings, because universities also seek to provide environments that are conducive to learning. At their best, these environments are not only intellectually stimulating and challenging, but also supportive and inclusive.

I use the acronym "SPACES" because it incorporates each of the dimensions (Social, Personal, Academic, Civic, Economic, and Settings) and because the term suggests the range of locations relevant to outcomes universities seek to provide in the college experience. The term "space" also brings to mind in a fitting way the unbounded ambitions of the research university. See Figure 1 for a summary of each domain and subdomain.

Students' growth in academic knowledge and skill is the center point in the mission of the university in undergraduate education, but the other dimensions may be as important for creating the conditions for a rewarding adult life.

The research university is exceptionally well designed to address each of these primary purposes of a college education. Learning occurs not only in the classroom, but also in residence halls, in student clubs and organizations, in intramural sports, at campus events, and in the organizations and communities surrounding the university.

The SPACES framework is rooted in the literature on the evolving role of higher education in American society and draws as well on research about the outcomes the public expects of a high-quality undergraduate education.²

Social Development Purposes

For most people, success in adult life depends on the development of social skills that can be honed in the university through interactions with faculty, graduate students, friends, and acquaintances.

The SERU Survey conceptualizes three primary subdomains of the social purposes of college: (1) adult interpersonal skills development, (2) appreciation of people from a wide range of backgrounds, and (3) social network development.

Interpersonal skills are essential in virtually every occupation that is not solely technical in content (Davis 1965). Interpersonal skills include skills of self-presentation, deep listening, and methods for keeping conversations moving forward. Most adult work occurs in small groups and large teams. The capacity to collaborate is consequently essential, as organizations from the American Association of Colleges & Universities (2007) to professional accrediting societies such as ABET (2000) have emphasized. Just as interaction and collaboration are ever-present parts of adult life, so too is the potential for conflict. Students who accept the reality of conflict and are adept at managing conflict have skills that are required in all leadership positions in American society (Bass 2010).

American society is diverse whether in terms of gender identities, race/ethnicity, socio-economic class, national origins, religion, or political views. Students are better equipped for life in a pluralistic society when they have an understanding and appreciation of the histories, cultures, and backgrounds of people from a variety of backgrounds (Schneider 2012). Thus among the social skills research universities teach are those related to interaction with diverse others.

Figure 1 - The SPACES Model: The Multiple Purposes of an Undergraduate Education

	<u>Domain</u>	<u>Subdomains</u>
S	Social Development	- Adult interpersonal skills development - Appreciation of people from diverse backgrounds - Social network development
P	Personal Development	- Exploration of life purposes - Developing a sense of agency - Fostering conscientiousness - Commitment to health and physical well-being
A	Academic Development	- Core cognitive skills development - Deeper knowledge of a major field - Research skills and engagement - Attitude of engaged learning
C	Civic Engagement	- Preparation for democratic citizenship - Community participation and service - Global awareness and knowledge
E	Economic Opportunity	- Opportunities for upward mobility - Career awareness and career knowledge - Work-related skills development
S	Settings	- Classroom climate for learning - Campus climate of inclusiveness

Social network development is the social science term for making friends and contacts. The evidence is overwhelming that many opportunities in life -- from meeting potential mates to finding jobs and advancing in a career -- are mediated through social networks (Granovetter 1985). The capacity to make friends is fundamental to the development of social networks, as well as, of course, being a pleasure and value in its own right.

Personal Development Purposes

Until the 1960s character development was one of the foremost purposes of elite higher education (Hunter 2000). Character development went out of fashion as a purpose of higher education when it came to appear that character assessments were often used as a way to discriminate against members of minority groups (see, e.g., Karabel 2005). Earlier conceptions of "character" had neither empirical support nor an inclusive frame of reference. Today, personal development has re-entered the university in a different way -- as qualities of personal conduct associated with a healthy, productive, and happy adult life.

SERU conceptualizes four primary subdomains of personal development during the college years, each one of which is supported by empirical data: (1) exploration of life purposes, (2) developing agency, (3) fostering conscientiousness, and (4) commitment to activities associated with health and physical well-being.

Some students come to the university with well-defined life goals. But many do not. They are still growing up and discovering themselves. By providing an enriched environment, the university encourages students to discover (or begin to discover) what they want to do and who they want to become in life. The university should expand wherever possible the opportunities students have to experiment with different visions of themselves and to discover the activities that bring the most meaning to their lives.

One of the weaknesses of the 20th century research university was its tendency to encourage passivity among students by placing them in large lecture halls with little opportunity for classroom participation. Threats to students' sense of agency come not only from large lecture halls, but also from their passive consumption of entertainment events and media (see Brint & Cantwell 2014).

The contemporary research university addresses this weakness by creating opportunities for interactive engagement in the classroom, by fostering undergraduate research, by building in small-group seminar opportunities, and by requiring theses and capstone experiences that bring students into contact with faculty members. It has become widely accepted that encouraging agency -- the sense that one is capable of taking initiative and thereby pursuing a creative, active experience of life -- is one of the responsibilities of the university (Astin 1984; Meyer & Jepperson 2002). Residence halls and student clubs and organizations are central to this mission. The classroom too can be central in so far as it is transformed from a place in which passive students listen to a place in which engaged students interact and collaborate with the professor and one another (Mazur 1997).

No personality trait has received more positive attention than conscientiousness. In social psychology studies, conscientiousness and its associated traits -- perseverance, responsibility and reliability -- are consistently associated with adult success, net of mental ability (Judge et al. 1999). The research university experience consequently seeks to encourage the development of students who can persist in a task in a careful and energetic way until it is accomplished at a high level. The assignments of academic life help to build conscientiousness, as do responsible positions in many co-curricular activities. At the same time, it is clear that over-involvement in campus social life can discourage the development of conscientiousness (Flacks & Thomas 2007).

The ancient Greek conception of strong mind, strong body has been revitalized in the modern university based on compelling research about the physical sources of adult well-being and life success. The evidence is clear that commitments to healthy diet and regular exercise are connected to mental health, longevity, and productivity in later life (see, e.g., U.S. Department of Health and Human Services 1996). The undergraduate years should be a time when students make a commitment, if they have not already, to the conditions for living a long, healthy life.

Academic Development Purposes

The academic purposes of undergraduate education are and remain fundamental. In theory students could develop personal character, social skills, civic commitments, and other important qualities in institutions other than universities. Only educational institutions, however, are explicitly intended to help students develop cognitive skills, subject matter knowledge, and research perspectives.

The SERU Survey conceptualizes four primary domains of academic purpose: (1) core cognitive skills development, (2) deeper knowledge of a specific scientific, scholarly, or creative field, (3) research skills and engagement, and (4) the attitude of engaged learning.

Universities continue to foster breadth of knowledge through general education requirements. However, it is difficult to know how much students are gaining from general education requirements, because at most research universities students take a variety of courses to satisfy these requirements. For this reason, educators have begun to focus on general cognitive skills as the means through which students demonstrate academic skills that go beyond mastery of a specialized field. A prominent set of general cognitive skills, promulgated by the American Association of Colleges & Universities (2007) and by regional accreditors (see, e.g., WASC 2013), consists of analytical and critical thinking, information literacy, oral communications skills, quantitative reasoning, and written expression. These general cognitive skills are sometimes referred to as “core competencies” or “essential learning outcomes.”

Majors remain the essential guarantor that students develop a deeper knowledge base in a specific scientific, scholarly, or creative field. About one-third of graduates never work in a job that is connected to their college major, and nearly half do not do so in the years immediately following college (CareerBuilder 2013). But for every student the major provides a deeper and richer experience of a formal field of knowledge than could otherwise be obtained. For many they provide the basis for success in graduate and professional studies.

The opportunity to participate in faculty-mentored research is a distinctive advantage of the research university. At major research universities no fewer than half of undergraduates participate in faculty-mentored research at some point during their college careers – either for credit, for pay, or as volunteers (Douglass & Zhao 2013). By participating in research, students learn what it means to interrogate a literature on a subject, to develop a research question, to develop hypotheses, to collect data in a methodical way, and to analyze data to reach conclusions related to their hypotheses and research questions. The mental outlook and skills of a researcher are becoming essential to success in many fields and to the work culture of the “knowledge society” (see, e.g., Baker 2014).

By the attitude of engaged learning, I refer to students’ willingness to go beyond a purely utilitarian approach to study. For students with a utilitarian mindset, the grade is what counts and the goal is to receive the highest possible grade for as little effort as is required to achieve it. An attitude of engaged learning, by contrast, captures students’ willingness to prioritize course work, to spend a sufficient number of hours on study, and to read assigned materials closely. It also captures students’ willingness to revise their work, to accept challenges that come with attempting to master academic knowledge and skills, to participate actively in class through asking questions and offering comments, and to discuss what they are learning with their peers. The full value of a college education cannot be realized unless both professors and students take an active, risk-taking approach to the classroom (Rawlings 2015).

Civic Engagement Purposes

The idea that higher education should prepare students for leadership in civic and community life goes back to the ancient Greeks. The goal of education was for them not only intellectual discernment, but also the capacity to act effectively in the public arena. Advocates for expanding higher education after World War II also emphasized this theme. For the members of the Truman Commission (1948), higher education was “at once to insure equal liberty and equal opportunity to differing individuals and groups, and to enable the citizens to understand, appraise, and redirect forces, men, and events as these tend to strengthen or to weaken their liberties” (p. 5). For the authors of the Harvard Red Book (Buck et al. 1945), education seeks to help the young to find their life purposes for which they are fit, and to equip them “for those common spheres which, as citizens...they will share with others.” (p. 4). Legions of political scientists have demonstrated the importance of education for effective participation in public and community affairs (see, e.g. Almond & Verba 1963; Verba, Scholzman, & Brady 1995).

The SERU Survey conceptualizes three primary subdomains of civic engagement: (1) preparation for democratic citizenship, (2) community participation and community service, and (3) global awareness and knowledge.

Democratic citizenship consists of knowledge about domestic political issues and participation in the political process. To be aware and knowledgeable, students must take the time to be informed through reading about public affairs. Participation in public affairs can take many forms; voting is the most common form, but involvement in campaigns, letter writing, petitioning, and protest are other avenues of participation.

Community service is a hallmark of today’s research universities. Students want to give back to their communities, and they do so by participating in a wide range of community organizations – from hospitals and schools to community gardens and

homeless shelters. A majority of students on many of our research university campuses participate in community service activities during their college career (Brint et al. 2010). Universities encourage this activity and some connect it to academic learning through service learning courses.

Civic engagement has expanded to include a global perspective. Research universities are the most international of American higher education institutions, fostering study abroad and international research collaborations, as well as hosting international students and visitors. University students will be acting in international as well as national and local arenas. Knowledge of global issues and awareness of cultures and societies beyond the United States is consequently essential for full democratic citizenship in the 21st century. Universities can help prepare students for the world by promoting international experiences, raising awareness of global issues, and providing opportunities for them to interact with students from outside the United States.

Economic Opportunity Purposes

Research universities are both a means of social mobility for many students and a source of the knowledge, skills, and habits that contribute to their economic opportunity and security in the future. The public expects universities to prepare students for employment, and a majority of students themselves list career preparation as their highest priority of their undergraduate education (see, e.g. Astin et al. 2002). Since the mid-2000s adults have also consistently told pollsters that a college education is necessary for a person to be successful in today's work world (Immerwahr & Johnson 2010).

The SERU Survey conceptualizes three primary subdomains of economic opportunity and security: (1) opportunities for upward mobility, (2) career awareness and career knowledge, including the capacity to link academic experiences and post-college plans, and (3) work-related skills development.

Public research universities, in particular, have an historic commitment to providing opportunities for students from all walks of life. Affordability is consequently a precondition to outcomes that matter. Students cannot realize their potential if they are overly concerned about the cost of college or if they make too many adjustments in educational goals because of economic exigencies. Moreover, many public university students come from families with greater ambition for their children than economic resources to support those ambitions. Therefore a goal of the research university must be to monitor how students experience college from the perspective of its affordability.

The research university offers a variety of ways for students to gain career awareness and knowledge: through internships, career fairs and panels, conversations with advisers, and use of the campus career center. Research universities have important reasons to determine whether students are taking advantage of these opportunities and what they are taking away from them. A majority of students at major research universities now say they intend to enroll in a graduate or professional program. Universities and the public are therefore also interested in knowing what features of the undergraduate experience equip students for success in graduate and professional studies and how their post-graduate plans articulate with their college experiences.

Research universities also directly provide work-related skills. Nearly all professionals and managers need to analyze, communicate effectively, reason with data, and use information and research. The university's role in developing students' work-related skills goes beyond what occurs in classrooms. In student clubs and organizations students also develop adult work skills by running meetings, marketing events, preparing budgets, and mediating disputes. For this reason the world of co-curricular learning should not be considered peripheral to the learning environment of the research university, but rather as another important resource.

Settings

The university is not simply a place where people gather to study. It also encompasses the physical, technological, and social environments that foster growth. These environments consist of facilities and personnel related to student success and interactional climates supportive of students from all backgrounds. The SERU Survey consequently focuses on two types of settings: (1) the campus climate for learning and (2) the campus climate of inclusiveness.

Instructors who care about their students' learning and are challenging and engaging enough to foster that learning shape effective classroom environments. Instructors' respect for their students, their ability to make academic knowledge relevant to their students' experience, and their ability to teach with passion are among the fundamentals for successful undergraduate teaching. To empower learning, universities should be fostering the multiplication of classrooms in which these qualities of teaching excellence are clearly on view.

The academically charged environment of the research university includes not only lectures and discussion sections, the workhorses of undergraduate instruction, but also special opportunities for learning – now sometimes called “high-impact practices” (Kuh 2008). These special opportunities include faculty-mentored undergraduate research opportunities, learning communities, study abroad, academically-enriched internships, freshmen seminars, and senior capstone experiences.

The academic environment also includes high-quality advising, academic support programs, and instructional technology resources. Each of these can contribute to an environment that fosters students’ success. Moreover, high-quality advising and other academic support programs are most important for students who are at risk of non-completion – those from less advantaged backgrounds and those with lower levels of academic preparation (Klepfer & Hull 2012).

In the United States, inclusiveness is a value that research universities have come to embrace as part of their social mission (Schneider 2012). The ambition of the university is not only to welcome but also to widen the experience of those it brings into its midst. To pursue inclusiveness the university is consequently concerned with whether students from all backgrounds feel welcome and accepted on campus; whether they are participating equally in opportunities for growth; and whether they feel that they are learning from the experiences of people different from themselves. The term “campus climate” captures this sense of acceptance and respect for the experiences of people from different racial-ethnic, gender, religious, national origin, and political identification backgrounds.

The Research University: A Learning Environment Like No Other

The research university is a learning environment like no other. Students are surrounded by world class authorities in a wide variety of fields. They are challenged to reach high standards in the classroom. Because faculty members emphasize discovery, the research university is unique in its capacity to equip undergraduates with research skills. The research university also mobilizes learning environments outside the classroom. From residence halls to student organizations to coffee shops and arts performances, the mobilized learning environments of the “city of intellect” provide regular, daily opportunities for growth.

The research university advantage derives from the multiple dimensions of student development it addresses. Many private higher education institutions self-consciously remove themselves from the larger community to focus on the life of the mind. The research university has never wished to remove itself in this way. Instead it embraces a contribution to the larger community, realizing that the ingredients for adult life success go beyond what is learned in the classroom or the research lab.

Research universities are not protected spaces. They encourage students to take initiative and to find the spots where they fit best. They expose students to people from a wide variety of backgrounds and ask them to find ways to work and live together across social divisions. The largest of our public research universities sponsor more than 1500 student organizations each – one for every 20 to 30 students (Brint & Cantwell 2015). But even with this level of activation, research universities are too large to ensure that every student who wants a leadership position on campus will find one. They are too competitive to ensure that every student who wants to graduate with honors will do so. It is no wonder that from this diverse, activist, and competitive environment America’s leading public research universities produce many more future business and political leaders than liberal arts colleges and as many, in absolute numbers, as the most selective private universities (Brint & Yoshikawa 2014).

The multiple purposes of an undergraduate education occur simultaneously, interpenetrate, overlap, and, at best, are mutually reinforcing. Research universities face the challenge of building and integrating the many spaces for learning they encompass. By emphasizing the big picture of learning at the research university – a picture that includes not only classrooms and research groups, but student organizations and community engagements -- the SERU Survey allows administrators and faculty to consider how best to maximize the effectiveness of the special educational institutions they manage. It allows researchers and administrators to explore the interpenetrations and overlaps in learning spaces as well as the potential for imbalances between them. It allows those who care about undergraduate education in the research university to measure all of its vital signs.

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¹ In 2012, NSSE began to focus on four themes and 10 engagement indicators. Intellectual development remained at the heart of NSSE. Seven of the 10 engagement indicators (higher-order learning, reflective and integrative learning, learning strategies, quantitative reasoning, collaborative learning, student-faculty interaction, and effective teaching practices) addressed issues of learning and intellectual development.

² I have drawn inspiration as well from the Gallup-Purdue Index of Adult Well-Being, which includes dimensions that I find relevant to the educational and developmental purposes of an undergraduate education in a research university (Gallup Organization 2015).