Learning for success in the 21st century

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My assignment - frame the conversation that you all are going to have -- with each other at your tables -- and as a larger group.

About 30 minutes of setting the scene -- then an hour for you to work together - then a half hour in plenary discussion.
This morning we are focusing on the big picture -- from 10,000 feet...

more than gen ed -- focus on what we want our students to look like when they leave us -- what will they know -- how will they continue to learn - what behaviors and activities will they embrace
Reading list includes key documents from education associations as well as some publications on the general topic of student learning.

I am mostly going to focus on some of the key findings and recommendations from national efforts –

and what I’ll be sharing is all related to essential student learning -- extending beyond general education and encompassing all aspects of student learning while they are with us.
You have in front of you a sheet of paper for note taking - use it - don’t use it - I created it to help you focus on some ideas that I’ll be sharing and some that will occur to you as a result of what you hear.. I encourage you to jot done those ideas and place them in these three categories… you will be working with these ideas during your group discussion..

The three areas of learning you will hear about are

--the content that we want students to know
--the skills and abilities that we want them to apply
And the behaviors, attitudes, and even values we want them to live..
National focus on higher education is at an all time high

Parents and students alike are asking--
What is the return on my investment in my or my child’s education?

Politicians ask -- What is the value added from our investment in public higher education?

Employers ask the same thing -- and add their concern for a prepared workforce
One of the most controversial and much publicized initiatives is from the US Dept of Education – led by and named after our Secretary of Education – the Spellings Commission is asking two basic questions…(on slide)

While there is a great deal of focus on accountability and oversight and return on investment in terms of access and affordability and even quality - - remarkably little about specific desired learning outcomes

The report has a lot of references to the perceived need for national benchmarking - and testing
The quality section does focus on a few desired teaching and learning strategies - specifically these four..but again – no clear articulation of desired student learning – just a conclusion that we need to do a better job of it..
Actually - US government has been talking for a while about the knowledge and skills it would like to see in its citizens -- an earlier report worth noting because of its focus on student learning -- is the SCANS report -- a 1991 joint commission from the secretaries of education and labor...
Many of the desired learning outcomes articulated 16 years ago are still the focus in more recent documents - particularly interesting as this specific report was focused on workforce development of high school graduates... Noteworthy as we look at some of the learning outcomes articulated in more recent reports from the higher education community...
Another call to action - was targeted at the largest research universities in the US – in part as a response to criticism in the quality of their undergraduate education focus –known colloquially as The Boyer Report --came out of the Boyer commission in 1998 - chaired by Ernest Boyer - President of the Carnegie Commission for the Advancement of Teaching – it has probably made the biggest impact on undergraduate education in large research universities in the past decade..

What’s interesting about the recommendations is the focus on the way we teach and the learning environments we create -- as opposed to specifically what we teach..
The special focus of this report is to have research universities think about how to leverage their research strengths to improve the undergraduate experience – to consider the unique contributions that their type of institution could provide – not to try to emulate the small class sizes and unrealistic student faculty ratios of the smaller liberal arts schools – but to consider how to provide an equally compelling but different experience with their large numbers of students, larger class sizes, and research/teaching interdependence…to move research from being at a tension with teaching – to being in support of…

Specifically the Boyer Report focuses on how to create research based learning experiences within courses as well as external to them.. And how to structure assignments to incorporate inquiry learning starting in the first year.
The work of the Boyer Commission continues through the structure of the Reinvention Center – the Center organizes regional meetings for small teams from research universities – they hold a biennial national conference on undergraduate education –

These are some of the topics from other recent regional meetings…

Reinvention Center

- Increasing student participation in research and scholarly activities
- Inquiry learning
- First-Year Experience
- Outcomes Assessment
- Information Literacy
- Interdisciplinary initiatives and issues
- Recruitment and Retention
- Diversity and Community

http://www.reinventioncenter.miami.edu//
Reinventing Undergraduate Education: A Blueprint for America's Research Universities

The ideal embodied in this report would turn the prevailing undergraduate culture of receivers into a culture of inquirers – a culture in which faculty, graduate students, and undergraduates share an adventure of discovery...

Ultimately Boyer is about a fundamental shift in the way faculty at research universities teach…
students improve much less than they should in: writing, critical thinking, quantitative skills, and moral reasoning…

Large majorities of college seniors do not feel that they have made substantial progress in: speaking a foreign language, acquiring cultural and aesthetic interests, learning what they need to know to become active and informed citizens…

Overall, despite their vastly increased resources, more powerful technology, and hundreds of new courses, colleges cannot be confident that students are learning more than they did fifty years ago…

Enter Derek Bok – President emeritus and research professor from Harvard university --

His 2006 book on our underachieving colleges – had a lot to say – and I am going to highlight some of it.. His work is based on extensive empirical research –

His bottom line is (last paragraph)
Bok on Undergraduate Education

- learning to communicate
- learning to think
- building character
- preparing for citizenship
- living with diversity
- preparing for global society
- acquiring broader interests
- preparing for a career

this is an outline of the chapters in this book –

I have selected just a few quotes to underscore some key points
Certain familiar qualities of mind and habits of thought may help resolve a wide range of problems ... every student would benefit from acquiring them...

An ability to
- recognize and define problems clearly
- identify the arguments and interests on all sides of an issue
- gather relevant facts and appreciate their relevance
- perceive as many plausible solutions as possible
- exercise good judgement in choosing the best of these alternatives after considering the evidence and using inference, analogy, and other forms of ordinary reasoning to test the cogency of the arguments

Bok p 68

Bok talks a lot about skills and abilities – those foundation skills and habits of mind that are applied across disciplines and that form the foundation for life long learning...
No one would argue with attempts to encourage students to be:

- more honest
- more scrupulous about keeping promises
- more understanding of those of different races, backgrounds, and religions

Nor would anyone in a democracy oppose efforts:

- to encourage undergraduates to vote, and
- inform themselves about public issues; and
- participate in their communities

Bok p 64

As this quote shows, Bok also addresses behaviors and attitudes specifically in reference to “building character” “preparing for citizenship” and “living with diversity”
Certain basic quantitative methods seem applicable to a wide enough range of situations to be valuable for almost all students…for example a reasonable grasp of statistics and probability may prove useful in thinking about a host of familiar problems…

Formal logic and advanced calculus, for example, have not proved especially helpful except for solving a limited set of abstract problems. As a result, courses on methods such as these should be available for those who need to learn them, but there is no compelling reason to force every student to master this material…

He even has some things to say about content knowledge – as is demonstrated by these comments about math requirements in which he encourages one approach and the discontinuation of another
I am going to move on from Bok to highlight some of the work from the Association of American Colleges and universities. One of the major higher education associations – founded in 1915 with an institutional membership of over 1100 colleges and universities – they have four broad goals, and dozens of initiatives and reports…
Liberal Education and America’s Promise (LEAP)

- 10 year “campaign”
- 33 person National Leadership Council
- university presidents, corporate senior executives, labor leaders, education researchers, and a governor

I am going to focus on LEAP initiative -- what is most interesting is the composition of the National Leadership Council (which by the way includes Bok) but which also includes a strong representation from business, labor, and government as well as from higher education
Perhaps an oversimplification of the LEAP initiative is a focus on the kinds of learning that will truly empower students to succeed and make a difference in the 21st century...

Specifically noting...
emerging challenges in the workplace, in a diverse democracy, and in an interconnected world
And to inform the answer to this question, they conducted a survey of business leaders and recent graduates...

November 2 – December 5, 2006
63% of employers agree that “too many recent college graduates do not have the skills to be successful in today’s global economy.”

In general what they heard was…

and I am going to share some of the specific data..
Consider the learning outcomes on these next few slides as you take notes in the three areas of content knowledge, skills and abilities, and attitudes and behaviors...

This bar graph shows the % of employers who said that colleges should place more emphasis on that learning outcome.
So for example - even if you went to the bottom - 46% of employers said that college should put more emphasis on foreign language skills.
It’s interesting to compare employer results with those from the recent graduates themselves...although the differences are not extreme..
# Recent Graduates:
Other Areas In Need Of More Emphasis By Colleges

% saying colleges should put more emphasis on each learning outcome

<table>
<thead>
<tr>
<th>Area</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Complex problem solving</td>
<td>49%</td>
</tr>
<tr>
<td>Information literacy</td>
<td>48%</td>
</tr>
<tr>
<td>Teamwork skills in diverse settings</td>
<td>47%</td>
</tr>
<tr>
<td>Cultural values/traditions</td>
<td>46%</td>
</tr>
<tr>
<td>Civic engagement</td>
<td>46%</td>
</tr>
<tr>
<td>Democracy/government</td>
<td>39%</td>
</tr>
<tr>
<td>U.S. role in the world</td>
<td>38%</td>
</tr>
<tr>
<td>Quantitative literacy</td>
<td>34%</td>
</tr>
</tbody>
</table>
And when asked to focus on just the top 2 most important skills – here’s the list of the overall top 7 skills and abilities that emerged…
Liberal education cannot be restricted, as it has been in the past, mainly to colleges of arts and sciences, or to the general education courses that most students take in addition to courses in their majors. The essential learning outcomes described in this report apply to the professional and occupational majors as well as the more traditional settings for liberal and liberal arts education.
Students will continue to pursue different specializations in college. But across all fields, . . . higher education [should] help college students become

**INTENTIONAL LEARNERS**

who can adapt to new environments, integrate knowledge from different sources, and continue learning throughout their lives.

Another interesting conclusion is the need to focus on learning to learn – that the specializations are not enough because we need to produce intentional lifelong learners.
The College Learning for the new global century identifies Essential Learning Outcomes – this is the kind of framework I believe UNLV will be framing as part of our planning process about our own student’s educational experience – and what you will be working on all day today. In general this report focuses on three areas of learning.

Knowledge
Skills
personal and social responsibility

and it underscores the importance of creating an integrated learning experience.
Knowledge Of Human Cultures
And The Physical And Natural World

Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

...by engagement with big questions, both contemporary and enduring

So not just a reference to content knowledge – but also to how that content could be taught..
Intellectual And Practical Skills

Including:

- Inquiry and analysis
- Critical and creative thinking
- Written and oral communication
- Quantitative literacy
- Information literacy
- Teamwork and problem solving

...applied extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance

And a focus on skills and abilities applied extensively...
Personal and Social Responsibility

Including:

- Civic knowledge and engagement—local and global
- Intercultural knowledge and competence
- Ethical reasoning and action
- Foundations and skills for lifelong learning

...anchored through active involvement with diverse communities and real-world challenges

And development of personal and social responsibility through active involvement with diverse communities and real world challenges
The foundations for inquiry, investigation, and discovery should be laid early and reinforced... through inquiry projects, students should learn how to find and evaluate evidence, how to consider and assess competing interpretations, how to form and test their own analyses and interpretations, how to solve problems, and how to communicate persuasively.

Like Boyer, LEAP also underscores the importance of inquiry and research based learning -- and the associated skills and abilities.
The research on this point is compelling. All students – including those least prepared – learn best when they can see the point of what they are doing. Illuminating real-world implications can help students discover the excitement and the benefits of powerful learning.

Finally College Learning ..emphasizes the importance of connecting learning to real world experiences..
Boyer and LEAP both address student engagement – particularly through learning strategies and the application of real world experiences – but there is another important initiative that is playing a key role on the national agenda. NSSE – the survey and the center. NSSE is a tool broadly used to measure student engagement. Over 1100 schools participate in administering the instrument – and there is a research center that generates reports and uses the information gleaned from NSSE data to inform further projects.
One of those projects is Project DEEP

The purpose of this project is to discover and describe what strong performing NSSE institutions do to achieve their level of effectiveness.

The project looked deeply at those schools (like U of Michigan) that achieve higher than predicted NSSE scores and graduation rates.

Upon investigation of dozens of characteristics, Project DEEP has concluded that there are two sets of characteristics that contribute to higher levels of student engagement – one is a set of Institutional Features and the other is a cluster of Effective Practices.
NSSE identifies six categories of institutional features and for each one I listed just one of many characteristics detailed more completely in their materials.
Effective Practices

1. Level of Academic Challenge
2. Active & Collaborative Learning
3. Student-Faculty Interaction
4. Enriching Educational Experiences
5. Supportive Campus Environment
Final initiative I am going to tell you about is Learning Reconsidered
Learning Reconsidered offers a campus-wide focus on the student experience that:

Introduces new ways of understanding learning and development as intertwined, inseparable elements of the student experience.

Learning is a comprehensive, holistic, transformative activity that integrates academic learning and student development, processes that have often been considered separate, and even independent of each other.

Jeanne S. Steffes, Ph.D.
President, ACPA—College Student Educators International

These next few slides are not mine – they come from the President of the American College Personnel Association. I share these slides because I wanted you to see that like LEAP, the Learning Reconsidered project underscores the importance of the intentional student learning outside of the classroom and promotes its integration with curriculum based learning.
These are the kinds of learning outcomes being discussed by our colleagues in student affairs.

<table>
<thead>
<tr>
<th>STUDENT OUTCOMES</th>
<th>Dimensions of Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive complexity</td>
<td>critical thinking, reflective thinking, effective reasoning, intellectual flexibility, emotion/cognition integration, identity/cognition integration</td>
</tr>
<tr>
<td>Knowledge acquisition, integration, and application</td>
<td>understanding knowledge from a range of disciplines (<em>acquisition</em>); connecting knowledge to other knowledge, ideas, and experiences (<em>integration</em>); relate knowledge to daily life (<em>application</em>); pursuit of lifelong learning; career decidedness; technological competence</td>
</tr>
<tr>
<td>Humanitarianism</td>
<td>understanding and appreciation of human differences; cultural competency; social responsibility</td>
</tr>
<tr>
<td>Civic Engagement</td>
<td>sense of civic responsibility; commitment to public life through communities of practice; engage in principled dissent</td>
</tr>
<tr>
<td>STUDENT OUTCOMES</td>
<td>Dimensions of Outcomes</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Interpersonal and intrapersonal</td>
<td>Realistic self appraisal and self understanding; personal attributes such as identity,</td>
</tr>
<tr>
<td>competence</td>
<td>self esteem, confidence, ethics and integrity, spiritual awareness, personal goal</td>
</tr>
<tr>
<td></td>
<td>setting; meaningful relationships; interdependence; collaboration; ability to work</td>
</tr>
<tr>
<td></td>
<td>with people different from self</td>
</tr>
<tr>
<td>Practical competence</td>
<td>Effective communication; capacity to manage one’s personal affairs; economic self-</td>
</tr>
<tr>
<td></td>
<td>sufficiency and vocational competence; maintain personal health and wellness; prioritize</td>
</tr>
<tr>
<td></td>
<td>leisure pursuits; living a purposeful and satisfying life</td>
</tr>
<tr>
<td>Persistence and academic</td>
<td>Manage the college experience to achieve academic and personal success; leading to</td>
</tr>
<tr>
<td>achievement</td>
<td>academic goal success including degree attainment</td>
</tr>
</tbody>
</table>
what is interesting is that consensus is emerging – and it is emerging through different initiatives involving various stakeholders
All of the initiatives address the various interconnected parts of a framework for student learning.

They focus on what the student should know when they leave us – and although they may not all label it this way - they focus on content knowledge, skills and abilities, behaviors and attitudes.

But they also talked about the fundamental importance – really the foundation - of engaging students in their educational experience in three important ways. How they are inspired and engaged by faculty as instructors in and out of the classrooms, and through learning strategies and approaches developed by faculty to develop each student’s own passion and curiosity. How they are excited and motivated through the content of the curriculum- engaging in the big questions – through relevance and real world application. And then the importance of engaging students to take steps for their own development through a variety of experiences available external to the curriculum. These student experiences range from academic support activities such as advising, tutoring, and library and field experiences, to social and lifestyle experiences such as living/learning communities, clubs, and athletics, and through student leadership experiences such as work study and student government.

The various reports underscore the importance for these student engagement strategies to be intentionally designed and coordinated to offer individual students with opportunities best suited to customized experiences that, in the aggregate, contribute to the overall desired learning outcomes.

And finally these initiatives remind us that this temple of knowledge here does not exist on its own – there is the context of the environment we are in – for example, expectations from a wide range of stakeholders – and the realities of the uniqueness of each institutions student composition and demographic.

This image is intentionally simplistic – but it reflects the inter-relationships of the complexities of
student learning..
A more thoughtful model might start to flesh out the meaning of each of these areas – and you’ll have a chance to work on this a bit more in the afternoon…for example – here is a version filled in with some of the AAC&U learning outcomes – and some issues related to each of the three columns that support and contribute to student learning…

...a deep and rich articulation and consensus of what is meant in each of these areas for UNLV could provide a more coherent approach to student learning for our campus.
A quick look at the Assessment plans from various departments across campus shows some focus on some of these broader skills and abilities… here are a few that I found in specific department plans..
I am going to close with some questions I have seen posed within the literature – mostly from AAC&U – and I pose them here to provide further food for thought. As you work together throughout the day you may very well engage each other in some of these questions.

**Questions to consider**

- How is essential learning defined at UNLV?
- How is the curriculum structured to achieve these outcomes?
- Does responsibility fall largely on general education or is it shared across the curriculum?
- How are faculty modifying the way they teach to promote this essential learning?
- How is inquiry and discovery reinforced across the educational experience?
- How are co-curricular experiences intentionally designed to promote this essential learning?
- How does the entire campus work together to contribute to the overall undergraduate learning experience?
I am going to close with some questions I have seen posed within the literature – mostly from AAC&U – and I pose them here to provide further food for thought. As you work together throughout the day you may very well engage each other in some of these questions.