

## **BTV Committee Summary, July 6, 2011**

La Academia (Milton Hall 185) • 7:00 – 9:00am

Bobbie Derlin, Facilitator

### **Announcements/Feedback**

- Workgroup feedback: Workgroups for Goals 1 through 4 are continuing to meet and making progress
- Template: Feasibility of using template to assist workgroups with their submission, revisions can be made draft template to accommodate respective goal, first drafts are due by 8/23
- Fall meetings: Will still be held on Tuesdays but will move to 7:30am, meeting days after holidays will be moved to Wednesday

### **Workgroup Composition**

- Expanding membership beyond actual workgroup is permissible. Guidelines have not been established for including additional people but it is advisable for the invitation to originate from the workgroup chair.
- Communication plan: Posting of materials and providing opportunities for commentary from university community, plan will be developed by committee, agenda item for further discussion at 9/13 meeting

### **Goal #5 – Effectiveness and Efficiency**

- Goal #5 draft: S. Ranade review of efforts and development of objectives and strategies, will continue to work through objectives and possibly develop KPI's, E&E is a meta-goal and can be a component of other BTV goals, existing E&E committee is handling related issues outside of BTV
- Considerations: Relationship of other NMSU committees to BTV efforts, revenue-sharing and use of IDC and cost share funds, university processes tend to hinder and not support objectives, there is no existing standardization or process for developing service centers or institutes
- Various ideas related to how existing committees or perhaps newly created committees or workgroups would be tasked with BTV implementation were discussed. How existing or created committees or workgroups will support BTV implementation will be discussed further at the 9/27 meeting.
- Critical thinking proposal: M. Walker presentation of having all first-year students take critical thinking (PHIL 211G), description of what course teaches, outline of plan whereby a single instructor could teach all first-year students, benefits for the university, faculty and students, applicable BTV objectives

The next meeting is scheduled for Tuesday, 7/19 and Goal #6 – Alumni and Friends will be discussed. The meeting will be held in La Academia (Milton Hall 185).

Building The Vision Committee  
7-6-11  
La Academia (Milton Hall 185)  
7:00 – 9:00 a.m.

1. Announcements/Feedback
  - a. Workgroup feedback
  - b. Template
  - c. Fall meetings
2. Workgroup Composition (Discussion Item)
3. Goal #5 – Effectiveness and Efficiency (Discussion Item)
  - a. Goal #5 Draft – S. Ranade
  - b. Critical Thinking Proposal – M. Walker
4. Other

Building The Vision Committee  
6-21-11  
Corbett Center Colfax Room  
7:00 – 9:00 a.m.

1. Announcements/Feedback
  - a. Workgroup feedback
  - b. Subject matter experts
  - c. Workgroup composition
  - d. Website material posting
2. Mission Statements (Discussion Item)
3. Goal #4 – Economic Engine (Discussion Item)
4. Other



## DRAFT TEMPLATE

### **President's Success Goal 5 – Effectiveness and Efficiency**

Achieve maximum effectiveness and efficiency in serving our communities and constituencies across our university system

#### ***Background and Definitions***

Effectiveness is the degree to which we accomplish items in the stated mission and clarified in the BTV goals and objectives. Effectiveness is a hard constraint and, as a general rule, efficiency and other considerations cannot be allowed to compromise the mission. When they do, the compromise must be documented and mitigation strategies and time-lines must be defined and communicated.

Efficiency generally means doing more with less. Thus cost-reduction or avoidance is a significant component of efficiency. However, efficiency is also about wise allocation of resources to maintain and increase effectiveness. In the near term, efficient operation may require investment.

#### ***Scope, Approach and Process***

Effectiveness and efficiency is a 'meta-goal' that cuts across the other BTV goals and objectives. The BTV process has identified seven goals, including E&E, and assigned objectives, strategies and key performance indicators to measure satisfaction of the goal. As such, the purpose of the E&E goal is to provide a strategic framework that calls out the balance between effectiveness and efficiency.

The work group has examined the efforts of the Effectiveness and Efficiency standing committee, as well as those of other institutions. These committees have realized efficiency via cost reduction or avoidance, process realignment, and the elimination of redundancies.

#### ***Strategic Plan***

***Objective 5.1: Effectively engage, educate and enrich students; explore, investigate and innovate; and serve the larger NMSU community***

**Strategy 5.1.A:** Provide curriculum which develops critical thinking skills, effectively utilizes technology, fosters independent seeking of knowledge, and supports diverse, competitive and evolving careers

**Strategy 5.1.B:** Strategically utilize cost share and indirect cost recovery funds to foster growth of priority research and service projects



KPI 5.1.1: XXX Target: XXX

KPI 5.1.2: XXX Target: XXX

**Objective 5.2:** *Efficiently utilize instructional, research, service and administrative resources to minimize cost to the student, the institution, and the public*

**Strategy 5.2.A:** Utilize the summer term to address student preparation, advance student completion, seize on faculty resource and realize a better return on instructional facilities

**Strategy 5.2.B:** Establish and utilize revolving funds to sponsor educational innovations, process improvements and cost reduction strategies

KPI 5.2.1: Facilities Cost per Student Target: Peer Quartile 1

KPI 5.2.2: XXX Target: XXX

**Objective 5.3:** *Seek and capitalize on alternative revenue streams*

**Strategy 5.3.A:** Provide continuing and professional education

**Strategy 5.3.B:** Fully develop and maximize the return on university assets

KPI 5.3.1: XXX Target: XXX

KPI 5.3.2: XXX Target: XXX

**Objective 5.4:** *Enhance university transparency and public accountability*

**Strategy 5.4.A:** Promote a shift in culture by widely engaging the extended university community in planning, and by sharing information through multiple communication channels and publically available accountability dashboards

**Strategy 5.4.B:** Fully integrate university planning, prioritization, budgeting, assessment and review

KPI 5.4.1: XXX Target: XXX

KPI 5.4.2: XXX Target: XXX

## **President's Success Goal 5 – Effectiveness and Efficiency**

Achieve maximum effectiveness and efficiency in serving our communities and constituencies across our university system

A discussion prepared by the Effectiveness and Efficiency Work Group:  
Satish Ranade, Glen Haubold, Mark Walker, Fred Lillibridge, Natalie Kellner

### ***Background and Definitions***

#### *Effectiveness*

Effectiveness is the degree to which we accomplish items in the stated mission and clarified in BTV Goals and Objectives. Effectiveness is a hard constraint and, as a general rule, efficiency and other considerations cannot be allowed to compromise the mission. When they do, the compromise must be documented and mitigation strategies and time-lines must be defined and communicated.


#### *Efficiency*

Efficiency generally means doing more with less. Thus cost-reduction or avoidance is a significant component of efficiency. However, efficiency is also about wise allocation of resources to maintain and increase effectiveness. In the near term, efficient operation may require investment.

Any discussion of Effectiveness and Efficiency must recognize the constraints of I&G funding based on enrollments. In order to improve effectiveness in instruction as well as the research and service areas we must find sources for new monies – research leading to IP, new services, revenue from assets, and revenue from advancement. Systemic improvements cannot be funded from enrolment-based state appropriations alone.

### ***Scope, Approach and Process***

The work group reviewed several E&E efforts at other universities, notably the University of Maryland System, the University of North Carolina System, and UC Santa Barbara, and UT Knoxville. Each of these institutions has created an E&E committee in the last five years. It appears that the committees were created in response to significant financial exigency.




These committees have had very significant community involvement; the North Carolina committee is composed entirely of representatives from the business and government

community. The committees have concentrated on cost reduction or avoidance through program reduction, process realignment and the elimination of redundancies. Strategies for cost reductions and/or revenue enhancement that are cited most include competitive contracting, tuition (resulting additional state support excluded), workforce/overtime reduction and deferred maintenance and repair. It appears implied that effectiveness has not been compromised by these measures; however the following comment is telling: “The Effectiveness & Efficiency for the Future committee of the Board of Trustees was formed in September 2008 to establish an ongoing emphasis on practicing the most responsible stewardship of University resources. Initially, the committee worked to help determine, implement and monitor savings initiatives. As it goes forward, the committee will serve to facilitate a culture of careful and conservative use of operating resources.” [UT Knoxville, 2008, <http://bot.tennessee.edu/committees/eef/index.html>]

NMSU appears to have already made considerable headway in effectiveness and efficiency. In 2010 the president appointed a standing committee, ‘Efficiency and Effectiveness’ (<http://business.nmsu.edu/~eec/>), under the leadership of Dr. Garrey Carruthers. This committee has operated as a ‘think tank’, generating a number of ideas to achieve efficiency in processes. These ideas are discussed and ranked- we suspect the impact on effectiveness is considered here - and the top five are recommended to the President for consideration. Implementation decisions are made by the President. The first report with a number of recommendations was submitted in December 2010. As an example, under utility bills, relamping recommendations have been implemented with savings of several tens of thousands of dollars. The work of this standing committee is expected to continue for the next many years.

### ***Effectiveness and Efficiency Strategic Plan***

As discussed above, specific efficiency improvements are often the first step towards effectiveness and efficiency. Further, these steps are already being developed by the E&E standing committee. In the context of BTV then, effectiveness and efficiency should be a ‘meta-goal’ that cuts across the mission and the other BTV Goals and Objectives. It should focus strategically on what it takes to successfully meet the mission – how successful are we in bringing value added to our constituents.




The BTV process has identified seven goals, including E&E, and is assigning objectives, strategies and Key Performance Indicators to measure effectiveness.

### BTV Goals

- 1.0 Strengthen our commitment to diversity of faculty, staff, and students, anchoring our path to excellence in an unwavering commitment to access and tolerance
- 2.0 Make graduation Goal #1 for our students and ensure demonstrable increases in student persistence in our degree and certificate programs
- 3.0 Focus our international reach to prepare students for a global society and expand our land-grant teaching and research missions.
- 4.0 Be the economic engine for New Mexico through linking and strengthening our research and economic development partnerships
- 5.0 Achieve maximum effectiveness and efficiency in serving our communities and constituencies across our university system
- 6.0 Substantially increase our university endowment
- 7.0 Build a culture of pride in partnership and achievement in our classrooms, studios, and laboratories and on our campuses, courts, and fields

### Goal 5 - Effectiveness and Efficiency

- 5.0 Achieve maximum effectiveness and efficiency in serving our communities and constituencies across our university system [Discussion of President's Success Goals and Living the Vision (04/06/11)]
  - 5.1 Provide faculty in adequate numbers to assure quality teaching and academic support
    - 5.1.1 Interdisciplinary Proposal Growth
  - 5.2 Attract and tenure faculty with terminal degrees and provide competitive, comprehensive compensation package
    - 5.2.1 Average Faculty Salary
  - 5.3 Provide faculty in adequate numbers to assure quality teaching and academic support
    - 5.3.1 Instructional Quality, % SCH Taught by Tenure/TT Faculty FTE
    - 5.3.2 Instructional Productivity, SCH per Faculty FTE
    - 5.3.3 Student/Faculty Ratio
  - 5.4 Appropriately allocate resources for instruction, research, service and administration
    - 5.4.1 Instructional Expense per Student FTE
    - 5.4.2 Administrative Employee FTE per Total FTE
  - 5.5 Obtain increasing levels of instructional funding
    - 5.5.1 Instructional SCH Growth
    - 5.5.2 Instructional Formula Dollar Growth



The E&E goals and objective should call out the balance between effectiveness and efficiency. For this reason we suggest a restructuring of the objectives and the four goals listed below are offered for discussion as a first draft.

***Objective 5.1: Effectively engage, educate and enrich students; explore, investigate and innovate; and serve the larger NMSU community***

Strategy 5.1.A: Provide curriculum which develops critical thinking skills, effectively utilizes technology, fosters independent seeking of knowledge, and supports diverse, competitive and evolving careers

Strategy 5.1.B: Perform cutting-edge research and development as a critical part the education mission in both undergraduate and postgraduate programs

***Objective 5.2: Efficiently utilize instructional, research, service and administrative resources to minimize cost to the student, the institution, and the public***

Strategy 5.2.A: Review course offerings and the semester structure, including the summer term to address student preparation, advance student completion, seize on faculty resource and realize a better return on instructional facilities

Strategy 5.2.B: Establish and utilize revolving funds to sponsor educational innovations, process improvements and cost reduction strategies

Strategy 5.2.C Establish and utilize revolving funds to substantially increase seed investments leading to NMSU hosting significant research programs

***Objective 5.3: Seek and capitalize on alternative revenue streams***


Strategy 5.3.A: Fully develop and maximize the return on university assets

Strategy 5.3.B: Provide continuing and professional education

***Objective 5.4: Enhance university transparency and public accountability***

Strategy 5.4.A: Promote a shift in culture by widely engaging the extended university community in planning, and by sharing information through multiple communication channels and publically available accountability dashboards

Strategy 5.4.B: Fully integrate university planning, prioritization, budgeting, assessment and review and publish 'report card' on how 'effectively' we execute our mission and how 'efficiently' we execute our mission.





Dr. Mark Walker  
Richard L. Hedden Chair of Advanced Philosophical Studies  
322 Breland Hall  
New Mexico State University  
P.O. Box 30001, MSC 3B  
Las Cruces, NM 88003-8001

May 1, 2011

Dear Provost Wilkins:

I have a suggestion that I believe will improve the academic abilities of students and save the university resources. I am approaching you with the idea because I believe it would require approval at the highest administrative level.

### **Summary:**

The idea is to make the department of philosophy's Critical Thinking course, Phil 211G, required for all first-year students. The benefit to students will be a course directed to a basic skill necessary for success in any academic endeavor. The benefit to the university is reduced instruction cost. As I will show below, I believe a single instructor devoting all of his or her energies to the task could teach the entire year's freshman class (approximately 2500 students) online.

### **About Philosophy 211G**

The term 'critical thinking' has a number of different senses in academia. Philosophy 211G is primarily devoted to analyzing and evaluating arguments. The term 'argument' is used in a technical sense: "reasons offered to believe a proposition, or to adopt a particular course of action."

The vast majority of courses at NMSU (as with all universities) deal with arguments in this sense. To cite just a few examples:

- A course in biology might offer students reasons to believe in punctuated equilibrium.
- The two-slit experiment might invite physics students to revisit their fundamental assumptions about the relationship between observation and reality.
- A class in feminism might provide students with reasons to act against patriarchy.
- A course in business management might provide students with reasons to be concerned about the environmental impact of business decisions.

So, arguments, in this technical sense, are found across the curriculum: there is not a single major that does not involve argumentation as a significant component of its subject matter.

All students come to university with some capacity to understand arguments. 211G offers students the opportunity to enhance these pre-existing abilities. A more concrete illustration of what 211G offers can be seen in the following example. Thousands of my critical thinking students have read this passage:

"Environmentalists argue that the fact that the earth's temperature is rising shows that global warming is caused by human activity. However, this argument is a bad argument because it does not account for other possible causes, e.g., prior to the arrival of humans, periodically the earth's temperature has risen suggesting that natural processes could be involved in the present increase in temperature."

A frightening number of students, early in their critical thinking studies, think that the conclusion is "Global warming is not caused by human activity" or "There are other possible causes for global warming than human activity." Many students think that the best evaluation of the passage is that it is a bad argument because it confuses correlation with

causation. These answers are particularly surprising given the short and relatively straightforward nature of the passage. I think as teachers, we should seriously wonder what our students glean from assigned readings that are almost invariably more complex than this little passage.

Within a few weeks of 211G they will learn to analyze the passage into premises (designated “P”) and conclusions (designated “C”) along these lines:

P1: Some environmentalists argue that the fact that the earth's temperature is rising shows that global warming is caused by human activity.

P2: The argument, “the fact that the earth’s temperature is rising shows that global warming is caused by human activity”, does not account for other possible causes for global warming.

P3: Prior to the arrival of humans, periodically the earth's temperature has risen suggesting that natural processes could be involved in the present increase in temperature.”

C: The argument, “the fact that the earth’s temperature is rising shows that global warming is caused by human activity”, is a bad environmentalist argument.

Students will learn how the argument is logically structured: P3 is offered in support of P2, and that P1 and P2 are logically linked to show that C. They will also learn that the correct evaluation is that this is a good argument. In effect, the argument charges some environmentalists with committing the post hoc fallacy.

This example also helps students understand the relationship between arguments and positions. When novices are asked what position the author takes on environmentalism, most offer the thought that the author of the above passage is not an environmentalist. Many propose that the author might be an apologist for “big oil”. With some effort students can be shown that the correct answer is that there is not sufficient information to determine what position the author takes on the issue. For all that is said, it may be that the author is a very committed environmentalist who wants to improve the argumentative cogency of his or her fellow environmentalists.

The course emphasizes elements of a good argument—premises that are relevant, sufficient and unproblematic—as well as identifying common forms of bad arguments, e.g., ad hominem, strawperson, guilt by association, equivocation, and other logical fallacies.

### **How 211G could be taught to large numbers of students for little cost**

I previously taught critical thinking to large classes (my record was 575 students in a single class) at McMaster University in Ontario. In part, this was possible because we had computer assisted learning for students to practice, and because we had multiple-choice format midterms and finals. For classes of 500 students I would usually be assigned two graduate teaching assistants. If we had classrooms of this size, it would be possible for a single individual to teach 3,000 students a year on a 3/3 load (6@500=3,000). However, my suggestion would be to offer 211G online.

One of the most important things I have learnt over several years of teaching this course is that critical thinking is a skill. It is mostly learnt by practice rather than hearing someone talk about the theory of critical thinking. So, in my classes I would spend maybe 10 or 15 minutes on the theory, and then have the students work through example after example. I believe better results could be had by having students work through more examples at their own pace. I have the beginnings of a website which embodies this teaching theory: [www.criticalthinkingbyexample.com/Chapter1/chapter1.html](http://www.criticalthinkingbyexample.com/Chapter1/chapter1.html). As you can see, the theory part of each chapter is very short, and there are five quizzes to test students’ knowledge. Eventually, I would like to have ten or twenty quizzes for each chapter and approximately 12 chapters.

Students would be able to access the text and the quizzes online, and work at their own pace. Students could be assigned some credit, say 30% of the course total, for simply completing the work for each chapter in a timely manner. For example, the website could be automated to record each chapter quiz taken by students. Students, then, could be rewarded for working through the course material in a timely fashion, say a chapter per week. Critics might point out that it would

be impossible to monitor whether students or their friends are taking the quizzes. However, the assigned marks would be for completing the assignment, not for the score on the assignment. Students would have little incentive to try to cheat on this component.

We would have students write multiple-choice exams in-person in our big classrooms to make sure that those registered in the course were the ones taking the exams. This may pose some logistical problems: it may prove difficult (but not impossible) to find enough classrooms to fit 1,250 freshmen per semester for a midterm and a final exam in a single sitting.

The course could be supported by a “critical thinking lab” run by the designated instructor. This would be a small classroom with several computers in which students could drop in for one-on-one help. The instructor could have a small cadre of teaching assistants to help.

## **Benefits**

**For the University:** I believe the instructor/student ratio for this course would be about an order of magnitude greater if this proposal were adopted, as compared with the university-wide average. The instructor/student ratio for 211G would be about 1:200 compared with the university average of 1:20. This would make us a more resource efficient university.

**For Faculty:** I can attest to the fact that I have had a number of faculty members at McMaster express their appreciation for critical thinking. They say students with logically tidier minds make for better participants in their courses. I don't mean to oversell 211G. I think of it as arithmetic is to calculus: it is necessary but not sufficient for proficient critical thinkers. There are many subject-specific critical thinking skills that students should learn beyond 211G. But having students take 211G early in their university career will allow instructors in other disciplines to worry a little less about the “arithmetic” part of critical thinking. Perhaps some of the greater teacher/student ratio efficiency achieved in 211G could be distributed to faculty through lower student to faculty ratios in other courses.

**For Students:** There is evidence that computer-assisted learning is effective in raising critical thinking proficiency.<sup>1</sup> So, the most obvious benefit for students is the enhancement of a vital cognitive skill. The fact that Phil 211 is a “G” course means that it should not impose any additional burden upon students. An uncapped online offering should be popular for students trying to juggle tight schedules and facing the grim reality that many courses fill quickly. The fact that students would not have to buy course materials, since everything they need would be available online, should make the course popular with students facing hefty textbook costs. Indeed, it seems to me that the university could easily make this sort of deal: any student who enrolls in 211G online will get a \$250 credit at the bookstore. Even with this rebate the course could still be one of the most financially lucrative ones offered by the university. I am confident that such a deal would make 211G wildly popular with students.

## **Conclusion**

My understanding is that NMSU's new administration is looking for innovative ideas, and so I offer this suggestion in that spirit. I should perhaps say that I have no direct personal stake in this, since I am not volunteering to be the instructor responsible.

Mark Walker

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<sup>1</sup> D. Hitchcock, “The Effectiveness of Computer Assisted Instruction in Critical Thinking,” *Informal Logic* 24, no. 3 (2004).

## **BTV Committee Summary, June 21, 2011**

Corbett Center Colfax Room • 7:00 – 9:00am

Bobbie Derlin, Facilitator

### **Announcements/Feedback**

- Subject matter experts: Workgroup captains should consider and track who they would like to invite in the fall
- Workgroup composition: Agenda item for next meeting to discuss pros/cons
- Website material posting: Notify N. Kellner or A. Vasquez of postings and distribution
- Goal #3 (International Reach): B. Stewart report of two seats in the Roadrunner program specifically for international students. Internship is intended to increase involvement on campus and with student government.

### **Mission Statements**

- Feedback: Draft statement is too long, should be shorter and more succinct, HSI designation could change, listing items can be exclusive of other ideas
- Considerations: Other institutions have relatively lengthy statements, most people are unaware of them, intent needs to be defined, development of statements is beyond the scope of the committee, identifying differences between mission and vision statements
- No general consensus was reached about an approach. B. Derlin will work with staff to generate new ideas and discuss with the Provost.

### **Goal #4 – Economic Engine**

- There is a parallel effort in Dean Carruthers' unit to develop a strategic business plan for the Office of the Vice President for Economic Development (VPED). J. Arterburn reviewed their process and related documents. The VPED strategic plan speaks to elements of BTV Goal #4. An additional goal could be developed to address research partnerships.
- Considerations: Hierarchical structure of goals/objectives/strategies, important to include other ideas (e.g. diversity) in relationship to other areas, examining business models to assist with development

The next meeting is scheduled for Wednesday, 7/6 and Goal #5 – Effectiveness and Efficiency will be discussed. The meeting will be held in La Academia (Milton Hall 185).