

To: Provost Mohamed El-Aasser

From: Creativity Task Force: Anna Chupa (Chair), Judy Duffield, Norman Girardot, Rochelle Goodman, Anne Meltzer, John Ochs, Todd Watkins and Peter Zeitler

Date: May 23, 2005

Re: Creativity Task Force Summary and Recommendations

You asked us to assess Lehigh's efforts towards promoting a creative environment across the university and to develop a plan for enhancing those efforts. We attach our summary and recommendations, with timeline and budget. In short, we found:

1. There is a wide range of views of creativity and what it means. No single definition or approach will suit the diversity of opinions across Lehigh.
2. That said, faculty uniformly believe creativity is important and is the foundation of academic teaching, research and scholarship. Most faculty see it as inherent in what they do, though most often an implicit rather than explicit part.
3. We are impressed with the recent growth in the breadth of approaches and opportunities that now exist on campus, particularly for upper-level undergraduates. There clearly is widespread campus interest and support in enhancing creativity, both at the top administrative levels and in the trenches among students, staff and faculty.
4. Nevertheless, given how fundamental everyone thinks creativity is to what we do, more could be done, for not only better engaging lower-level undergraduates, but also faculty, staff and graduate students. We make specific recommendations below in four categories:
  - a. faculty and staff engagement;
  - b. student engagement;
  - c. space and facilities;
  - d. management and development.
5. We note that because of (1) and (2) there is surprisingly widespread resistance across campus to a top-down approach to promoting creativity.
6. Many faculty consider time, money and a perceived campus lack of tolerance for risk and failure as formidable barriers to creativity.
7. Our benchmarking at other institutions suggests that where creativity is explicitly promoted institutionally it is often tied to entrepreneurship programs, innovation and design programs, or to the arts. While entrepreneurship, design and the arts are all important components of Lehigh's creativity-enhancing efforts, and we make specific recommendations about next steps, each is too narrow to shoulder the creativity mantle alone at Lehigh.
8. We conclude that fostering creativity is as much or more about fostering a pervasive campus culture and diverse intellectual and social environment that stimulates creativity and explicitly demands and expects it than about particular courses, techniques or dictates.
9. So, our recommendations aim in large part to support and stimulate a more creative campus environment through creative bottom-up experimentation across all levels and divisions of campus.

We would be happy to meet with you to discuss these issues further, and remain willing to help in pursuing the next steps we suggest in our recommendations.

# Creativity Task Force Final Report

## 1. Creativity Task Force Charge

The Provost commissioned a task force of faculty and staff to assess Lehigh's efforts towards promoting a creative environment across the university and to develop a plan for enhancing those efforts. The charge:

- 1) To complete a campus inventory of existing creativity related activities and benchmark creativity programs at other institutions, and
- 2) To develop a shared vision for fostering creativity at Lehigh and to develop a strategic plan which includes goals and recommendations for a specific implementation plan for embedding creativity throughout the curricula and make it available to ALL students at Lehigh. The plan should include a timeline and a budget.

## 2. Working Definition of Creativity

Creativity is a notoriously elusive notion. As a starting point, we adopt a definition modified after one proposed by Steven Tepper in his discussion of the creative campus.<sup>1</sup>

*Creativity reflects those activities that involve the application of imaginative and intellectual energies to the production of new ways of solving problems, expressing ideas, eliciting behavior, or generating aesthetic responses which are in some manner novel, surprising, or challenging with regard to prevailing cultural orders.*

There are numerous other views, and considerable differences of opinion on campus. No single definition or approach will suit the diversity of opinions across Lehigh. For instance, the social psychologist Mihaly Csikszentmihalyi<sup>2</sup> would add that creativity is a process by which a symbolic domain in the culture is changed...Creativity does not happen inside people's heads, but in the interaction between thoughts and a socio-cultural context. It is a systemic rather than an individual phenomenon. It is, in other words, more fruitful to enhance creativity by improving conditions in the environment than by narrowly trying to get individuals to think more creatively.

Tepper suggests focus on the structural, cultural or environmental context for creativity, or creative interaction, within a particular campus or community. He points to various factors or conditions conducive to a creative campus, including, among others: collaboration; cross-cultural exchange; interdisciplinary exchange and integration; the arts as important catalysts for work across domains; self-criticism and sense of humor; time and resources; fostering curiosity and the use of a disciplined imagination; focus on process rather than outcomes; inquiry-driven project-based approaches; non-conformity in relation to prevailing authority and paradigms; encouragement for risk-taking and tolerance for failure. A creative environment encourages unconventional thinking and alternative ways of seeing and understanding. Tepper<sup>3</sup> observes:

“Creative people feed off the energy of others; they excel when challenged and forced to confront and incorporate other perspectives and approaches; and they depend on the support and encouragement of allies and colleagues when trying out new and often risky ideas.”

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<sup>1</sup> *Chronicle of Higher Education* 10/01/04.

<sup>2</sup> *Creativity*, 1996.

<sup>3</sup> *The Creative Campus, Who's N. 1?*

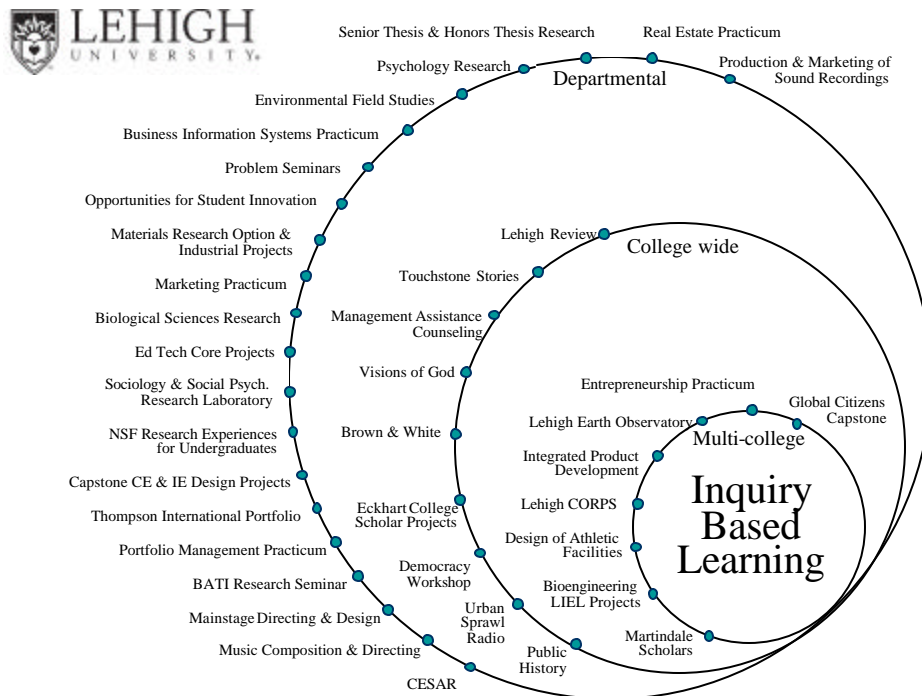
### 3. Campus Inventory of Existing Creativity Related Activities

During Spring 2005, we undertook a campus survey to inventory existing creativity-related activities. A clear consensus arose across disciplines: faculty uniformly believe creativity is important and inherently is the foundation of academic teaching, research and scholarship. Most faculty see it as inherent in what they do, though most often an implicit rather than explicit part. We are impressed with the recent growth in the breadth of approaches and opportunities that now exist on campus, particularly for upper-level undergraduates.

There clearly is widespread campus interest and support in enhancing creativity, both at the top administrative levels and in the trenches among students, staff and faculty. We note the wide array of activities and programs, which among many others include: ArtsLehigh; Bioengineering LIEL projects; College Scholars; the Design Arts Program; the Humanities Center; Entrepreneurship programs; the Environmental Initiative; the Global Citizenship Program; the Global Union; senior theses; the Integrated Product Development (IPD) Program; Lehigh Art Galleries; the Lehigh Earth Observatory; Music ensembles; REUs; student publications; student political activism; study abroad; Theatre productions; and the Zoellner Arts Center.

One of our central findings from this inventory--a clear consensus--is the emphasis faculty place, when asked about best practices in promoting creativity, on upper-level, original-inquiry-based experiences such as senior theses and real-world collaborative projects. The general campus tendency is to see these creativity-enhancing opportunities as last in a pyramid of skills development, starting with building fundamental skills and tool sets in the early years, then turning students loose to be creative in more open-ended inquiry-based activities in their last semesters here.

Large and increasing numbers of Lehigh undergraduate students, participating in a diverse range of programs illustrated in Figure 1, engage in substantive research and scholarship, making significant original intellectual, artistic, scientific and technical contributions. This is becoming a real hallmark of Lehigh, and Lehigh promotes itself this way.



The census detailed in Appendix 1 indicates that in a given year:

- Approximately 1400-1700 students, or roughly one-third of the undergraduate student body per year, currently enroll in courses that have significant original inquiry as a primary course focus. The uncertainty lies in some unknown level of double-counting and annual fluctuations.
- By graduation, fully 500-600 students, or about half the graduating class, have prepared a REQUIRED thesis, project or other significant original-inquiry work.
- Add students who have participated in research and other scholarship not required for their program, and we estimate 60 to 70 percent of each graduating class now have done at least one significant original inquiry activity before leaving Lehigh.
- Encouragingly, this is up from roughly 50 percent in a similar census in 1999.
- Importantly, it is also clear that 100 percent of Lehigh undergraduates have the opportunity to enroll in such programs if they wish, though not all do.

Responses to our inventory questions raised concerns about a reductionist effort that would attempt to codify and compartmentalize what cannot and should not be encapsulated. Moreover, Lehigh faculty are skeptical about creativity courses or the applicability of creativity techniques (e.g. TRIZ) to non-business or non-engineering courses. However, there is also willingness to explore collaborative teaching and research models that will foster creativity. To that end, faculty members seem ready and enthusiastic to explore environmental and administrative structures that may promote creativity through collaborative teaching and learning.

Indeed, many cross-disciplinary programs are now thriving across campus. Often faculty and students see the greatest opportunities for creative thinking at the intersections of disciplines. This emerging culture at Lehigh is healthy for creativity, and Lehigh has embraced cross-disciplinary experiential learning more than many peer institutions over the last five years. We are demonstrably leading in this area.

The survey reminds all of us that any serious approach to such an important but elusive subject requires a broad, imaginative and liberal approach to inculcating more of a creative atmosphere at Lehigh (i.e. finding the responsive middle between technical/instrumental approaches and humanistic/aesthetic approaches). The point is not that we can coerce creativity to happen, but that we can and should create conditions that allow for it to arise more frequently, spontaneously and naturally. And when it does arise, we should acknowledge and reward its occurrence.

#### **4. Benchmarking**

The Creativity Task Force members reviewed programs at other colleges and universities with particular attention to institutions that had secured large grants for creativity and entrepreneurship programs, and those listed as noteworthy by the *Princeton Review*, Entrepreneur.com and Success.com. Not surprisingly, the list of creativity and entrepreneurship programs is growing. The Kaufman Foundation Resource Center lists 655 entrepreneurship programs of which 271 have endowed positions. Research on educational trends indicates that institutions see these programs as an effective way to bridge the gap between concepts, theories and practice, and as essential to their students' future employability, i.e. competitive edge in job search.

Our research indicated that the majority of programs (75 percent) emanate from the business schools or in engineering schools and are often called "focused" "centralized" or "magnet" programs. Every program we reviewed in this category was organized through a center or institute. We also looked at programs that are university-wide. Programs in this group, called "radiant" programs, are highly decentralized and are considered much more difficult to start and organize. It is important to note that institutions that won major grants from the Kaufmann Foundation grouped their

entrepreneurship activities under an overall institutional vision strongly endorsed by the top leadership who declare entrepreneurship as a priority for students and the institution. At these institutions, the vision for entrepreneurship permeates institutional communications and branding.

## **5. Recommendations, Timeline and Budget**

Our recommendations fall into four broad categories: faculty engagement, student engagement, space and facilities, and management and development. Some are straightforward and low cost, while others will require more time, deliberation and resources. We address each in turn and suggest timelines and budgets. Overall, we believe the most important challenge and goal is to create a culture and environment conducive to creativity, rather than relying principally on any specific program or toolset.

### **5A. Faculty Engagement.**

#### *Recommendation 1. Incubation Mini Grants*

A significant fraction of the existing Lehigh programs mentioned in our feedback inventory was funded initially under the ILE/Ventures funds several years ago. The pedagogic approach targeted with those seed funding programs is now well entrenched. This suggests that sustained low level funding for course and other activities' incubation can have long-term widespread effects on the curricular culture. Grants could be focused on changing existing or creating new courses and activities to foster creativity, collaboration and open-ended problem solving. Particular attention could be given to expanding first and second year experiences and to enhancing graduate offerings. A small faculty committee with one or two representatives from each college would administer RFPs targeted at fostering creativity-enhancing new courses or changes in existing courses. Key selection criteria would be the extent to which the proposal takes risks and stretches the boundaries of student and faculty thinking and activity.

#### *Recommendation 2. Prestigious 3-Year Faculty Chairs and Fellowship Opportunities*

One champion in each college should be appointed, to free up time and energy to foster creative endeavors, take intellectual risks, and push the boundaries of their own and their colleagues' thinking. One or more should include cross-college seconding to cross-fertilize ideas and stimulate collaboration among disciplines. A sabbatical system has been used elsewhere to place faculty in other colleges/departments much like the artist-in-residence model. Faculty fellowships can be developed as a start-up strategy. Such fellowships could allow the faculty fellow to engage in a number of activities, including team-teaching, collaborative research, guest lectures, etc. Alternatively or in parallel, Lehigh could establish something analogous to an ACE Fellowship, where a fellow would serve one month in nine different departments. A similar idea could apply to bringing in external creative persons in residence as collaborative and inspirational models.

#### *Recommendation 3. Faculty Collaboration Seminars*

Two possible models: 1) Like the Global Citizenship faculty group, we suggest bringing together select faculty across disciplines for ongoing series of discussion colloquia to explore potential collaboration and ways to increase creativity in research and teaching. Each year a new group could be selected by application or invitation. This should not be on top of everything else faculty are asked to do, so participants should receive small stipend or release time. 2) This could also be implemented as an explicit focus on creativity and collaboration in faculty development seminars.

#### *Recommendation 4. Periodic Internal Flex Time*

In our survey, faculty report that severe constraints on time and energy are the largest barriers to creative ideas in research and pedagogy. Some periodic free flextime, partial internal sabbaticals of a sort, to free up time for creativity-enhancing endeavors would help. This could be part of

Recommendation 1, or a stand-alone expectation that departments will regularly give faculty members some flexibility to think. The overall goal should be to build in the expectation of roughly 15 percent. Part of the problem is the continued expansion of ad hoc committees, new curricula and programs, without compensating elimination of other activities. The committee suggests more explicit attention to regular pruning and sunset provisions. Departments could be asked to develop strategies for doing less.

*Recommendation 5. Expand Faculty Orientation*

New faculty orientation should include significant discussion of pedagogy and approaches to expanding creativity enhancing opportunities for all students across all disciplines. Expectations and teaching culture should be established early.

**5B. Student Engagement.**

We suggest building up the engagement of all Lehigh students in original inquiry activities during all years of the curriculum.

*Recommendation 6. Support Undergraduate Research Cafe*

Many upper-level courses already require in-class presentations of student projects and research near the end of each term. We suggest packaging those applicable courses and faculty willing to participate as the Undergraduate Research Cafe with a program listing days, rooms and times. Freshman in intro courses and other core courses could be required to attend and evaluate student posters and presentations from several disciplines. Over the years, planning could better coordinate the presentation dates, rooms, etc. This would be a low-cost mechanism to improve communications skills development and exposure to upper level course content and expectations for freshman, cross-disciplinary exposure for students, community building, and, reasonable PR potential if pitched well. A low-level pilot of this is going on this semester, run by a service fraternity advised by Keith Schray. Once well established this would cement a broad campus wide culture of creative thinking and original inquiry. Freshman and sophomore curriculum should introduce original inquiry expectations as well.

*Recommendation 7. Graduate Student Research Café*

Implement the same idea for graduate students (and perhaps one for faculty even...)

*Recommendation 8. Expand Attendance Horizons*

Expectations should be built into the curriculum for students to attend a number of diverse outside-the-classroom events. These would include both discipline-related and creativity-related (i.e., arts, culture, international, science and technology) events, such as speakers, panel discussions, field trips, moderated films, performances, exhibitions, etc. Students would select events each term from a broad menu of both campus and community events approved and continuously updated by a coordinator (ArtsLehigh??). Specific events might be required for specific courses. This could be tied to particular required courses (e.g. first-year seminars). Emphasis should be on the first year, to get students into the habit of attending a wide array of things, and expose them to the opportunities throughout campus. We anticipate that an average of two events per month would be roughly appropriate per student. This would add very little to costs. Lehigh spends millions on events and the community is rich in them as well, yet students complain there is nothing to do. The recommendation leverages this and recognizes that out of class events are an integral part of the Lehigh learning experience. Students are more likely to remember ten years from now the lessons Jessie Jackson, Jr. brought to campus than they are, say, marginal cost theory or Rawlsian principles of social justice. Credit exists only as an incentive for learning. Let's use it that way. Verifying attendance by students might require a part-time coordinator. Ideally this would include some subsidized events tickets.

*Recommendation 9. First-Year Experience Committee Include Creativity*

The first year experience committee should expand first year experiences to promote creativity, in all three undergraduate colleges. We could develop more small open-ended problem solving pieces and other challenging creativity enhancing activities in introductory (and intermediate) courses.

*Recommendation 10. Inquiry-based experience graduation requirement*

We could consider a requirement for all students to do at least one open-end, inquiry-based course/ experience before they graduate. Our survey indicates we are 2/3 there already, and many of these experiences have extra capacity.

*Recommendation 11. Graduate Student University Seminars*

Create a first-year one-credit joint seminar for graduate students from all disciplines and all colleges to explore topics rich in multiple perspectives and approaches (e.g. global warming, globalization). Graduate students are particularly isolated within disciplines and departments. Joint University Seminars would create more of a community among graduate students, and allow far more cross-disciplinary interaction and cross-fertilization than now occurs. We also urge additional full courses with campus-wide appeal for graduate students to take as part of their degree programs, and urge departments to encourage students to take at least one such course per degree.

## **5C. Space and Facilities**

*Recommendation 12. Spaces to Foster Gathering and Interaction*

As building and space renovations continue at Lehigh, facilities planners and architects should explicitly place a high priority on ways to foster interaction and chance meetings by creating inviting “hang out” gathering spaces. Students should feel ownership, comfort and convenience in the spaces and want to go there. Too often our spaces are mainly functional. We see this as an important function too, that should be placed on a priority par with classroom or office needs. Moreover, the university should consider using community spaces that can bring students and faculty together with area residents. An example is the successful Fluxus project that was run by the Humanities Center in which students performed in storefront on Fourth Street in Bethlehem during First Friday.

*Recommendation 13. Creativity and Cross-Disciplinary Special Interest Housing*

We could consider creating special interest houses, floors or spaces for creativity-rich cross-disciplinary interests such as entrepreneurship. We should beware of narrow interest housing, which can isolate groups rather than foster interaction.

## **5D. Management, Timeline and Development.**

*Recommendation 14. Implementation Planning Committee*

We recommend a faculty committee be charged with developing details for the recommendations above, implementation steps, timelines and resource implications, and run pilots during the next academic year.

*Recommendation 15. Deputy Provost as Champion for Cross-Disciplinary Programs*

We hope Lehigh can find creative ways to bring various existing programs together in a more synergistic and dynamic way. A strong perception exists among the faculty that disciplinary and college silos inhibit creativity-enhancing cross-college collaboration, and that even established cross-disciplinary programs at Lehigh tend toward isolation within single colleges because of the dean-centered budget and incentive structures. One improvement would be to assign explicit responsibility and accountability for internal and external championing of cross-disciplinary programs to one of the new Deputy Provosts.

*Recommendation 16. Timeline and Budget*

We attach a recommended timeline and suggest a budget with development gift opportunities.