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# Integrating CTLs Into Campus Strategic Planning Through an Effective Brainstorming Process

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*One way Centers for Teaching and Learning (CTLs) can position themselves at the epicenter of campus activity and insert themselves into strategic planning is by transforming group work through an effective brainstorming process that the authors have developed called Ideation Development for Excellence in Academic Learning (I.D.E.A.L.). The authors explain the evolution of the process in a learning community from best practices in brainstorming through a working model. The process has been effective with actual groups both on and off campus (vs. laboratory conditions).*

"Collaboration drives creativity because innovation always emerges from a series of sparks—never a single flash of light"—Keith Sawyer, *Group Genius*

## Introduction

According to Sorcinelli, Austin, Eddy, and Beach (2006), Centers for Teaching and Learning (CTLs) have entered the Age of the Network, wherein higher education must involve the entire campus in key projects and break down entrenched campus silos: "Faculty developers, and institutions alike are facing heightened expectations, and meeting these expectations will require a collaborative effort among all stakeholders in higher education" (pp. 4-5). More precisely, to enhance their viability, CTLs must broaden the scope of faculty development, their major goal, so as to

achieve the new holy grail: "Linking faculty development to institutional missions thus becomes a key element in an institution's strategic plan" (p. 167). The more excellent services that CTLs provide for the campus good, the greater the leadership role of CTLs and their chances of being integral to that strategic plan. In an assessment of current areas of CTL service, Hines (2009) reports the top five as (1) events and activities, (2) consultation services, (3) publications and resources, (4) grant programs, and (5) mentoring programs. We would like to propose another area, one with which we have recently encountered great success. Our brainstorming procedure offers a service that brings together key campus stakeholders and helps them create an effective product. This process provides another solid service that CTLs can use to position themselves within university strategic plans.

## A Short History

Two years ago as CTL co-directors, we were tasked with developing a classroom that produced optimum student learning. To create the Learning Environment for Academia's Future (L.E.A.F.), the two of us, as co-facilitators, brought together a diverse campus group into a professional learning community, choosing each member for his/her subject expertise: three people from technology, one from instructional design, one from the Department of Communication, one from educational research, and us, two pedagogists from faculty development. Theodore Roethke observes in "The Waking" that "I learn by going where I have to go." So did we.

In our weekly meetings L.E.A.F. got off to a slow start, but after developing a well-defined process for generating and refining ideas, the community began to make progress and moved rapidly toward our goal of creating a classroom for the future that synthesized the best practices of technology, pedagogy, instructional design, and communication. That goal is now a reality, as we have developed an incubator classroom, a summer-long L.E.A.F. Fellows development program for exposing faculty to it and certifying them in its usage, and a comprehensive assessment process, including an observation form and a syllabus design rubric. Moreover, we have reported to the campus, presented at a state-wide conference, produced three articles for submission, and created a transferable process of group ideation that we are currently applying to the creation of a new building as well as other campus issues such as our Quality Enhancement Program. As excited as we have been in accomplishing our task, we have been equally fascinated with the group dynamics of L.E.A.F.—that is, those elements that have allowed us to achieve our high level of success.

What follows is an account of our experience developing the process we have come to call Ideation Development for Excellence in Academic Learning (I.D.E.A.L.) as well as a reflection on the experience and some suggestions as to how CTLs can implement the process on their campuses. Importantly, this group dynamic can be transferred to some (though not all) faculty, student, and administrative teams so that they can attain high levels of achievement. In fact, as so many academic decisions necessitate not reinforcing silos but fostering greater interdependence, such teamwork may also be the best way of incorporating the ideals of inclusion and transparency.

## Review of Literature on Brainstorming

Whereas research usually opens doors, allowing scholars to build on the shoulders of others, our initial scan of brainstorming as a possible solution to the negative aura surrounding campus group work almost stopped us in our tracks. Brainstorming is a technique created in the 1950s by an executive in a Madison Avenue advertising agency. Alex Osborn (1957) believed that groups could generate twice as many ideas as individuals working alone if they followed some simple guidelines: quantity of ideas is more important than quality, let all ideas live, don't assess ideas, and piggyback off each other's ideas. Unfortunately, research by Taylor, Berry, and Block (1958) and others tended to invalidate Osborn's claim. In fact, individuals (nominal groups) generating ideas alone produced more ideas than groups (Mullen, Johnson, & Salas, 1991), and researchers concluded that ideators working alone who later attached their ideas to those of others generated higher idea quality (Furnham, 2000). Subsequent studies discovered three major inhibitors of group creativity: *Production blocking* occurs because since only one group member can speak at a time, ideas are lost, people fixate on certain ideas, and some contributors censor themselves; *evaluation apprehension* results because some ideators are afraid their suggestions will be negatively received / they will appear stupid; and *free-riding/social loafing* is a phenomenon wherein some ideators will not contribute as much to a group as they will on their own.

So, if the evidence fails to support pure brainstorming, why do business and educational groups continue to use it? More importantly, why should L.E.A.F. try it? Perhaps the main reason is sociability; people normally isolated learn to work together, and what they generate together seems to gain immediate acceptance. Furnham (2000) offers several more reasons organizations use brainstorming "even if they know that it is not the most effective way of developing new ideas":

- "to increase decision acceptance,"
- "to pool resources," and
- "to benefit from specialization of labour" (p. 26).

In addition, Larey and Paulus (1999) have demonstrated "interactive groups were more accurate than individuals at identifying the most creative ideas" (p. 133). O'Leary-Kelly, Martoccio, and Frink (1994) point out that following certain best practices can lead to effective brainstorming, showing that groups trying to achieve a difficult group goal do better than groups without clear objectives, a study confirmed by Wegge and Haslam (2005).

One caveat needs to be issued about much of this research: its artificiality. The majority of the studies of brainstorming have taken place in laboratories using graduate students under highly controlled situations. In addition, some of the studies have attempted to rate the ideation produced as high quality. First, can the level of ideation truly be rated? Second, are prompts such as coming up for new uses of paperclips sufficiently real world as to justify rating? In contrast, L.E.A.F is a real group trying to confront real academic problems.

## Best Practices in Brainstorming

Despite much research to the contrary, in its 50 years of existence, brainstorming has evolved some best practices. As Brown and Paulus (2002) observe, "unstructured groups left to their own devices will not be very effective in developing creative ideas" (p. 211). When our L.E.A.F. group began, we researched proven strategies, among which are as follows (in no particular order):

1. Brainstorming can be more effective when used in three stages: Brainstorm alone, brainstorm with others, and brainstorm alone afterwards (Leggett, Putnam, Roland, & Paulus, 1996).

2. Production blocking (which reduces generated ideas because members take turns with the floor) can be overcome (Barki & Pinsonneauult, 2001).

3. Groups need convergent thinkers (who tend to fixate on a single category in depth before continuing) and divergent thinkers (who tend to hop-scotch through categories).

4. Diversity of knowledge bases seems good for a group, though not enough research has been done in this area. Gender does not seem to matter (Paulus, Larey, & Ortega, 1995).
5. Training in group idea generation can aid performance (Meadow, Parnes, & Reese, 1959; Parnes & Meadow, 1959).
6. Members who prefer to work in groups perform better in group than nominal settings (Larey & Paulus, 1999).
7. Members need to be trained to restrain from *idees fixe* and to switch to perception shifts (suggested by Larey & Paulus, 1999).
8. Setting a challenging group goal improves performance (Wegge & Haslam, 2005).
9. Sawyer's "seven key characteristics of effective creative teams" (2007):
   - Innovation emerges over time.
   - Successful collaborative teams practice deep listening.
   - Team members build on their collaborators' ideas.
   - Only afterwards does the meaning of each idea become clear.
   - Surprising questions emerge.
   - Innovation is inefficient.
   - Innovation emerges from the bottom up (pp. 14-17).

## Reflection

Our review of the literature on brainstorming/group work seemed to be a suitable point of departure for L.E.A.F., but as we soon discovered, this approach presented definite problems. Because our L.E.A.F. group consisted of individuals from several areas, we found ourselves gravitating to our individual areas of expertise rather than looking for ways to

synthesize—that is, we had a solid list of "best practices" in brainstorming, but when we attempted to put these practices to practical use, we realized while we had a definite goal for our collaboration, the optimal learning environment, we had no idea of how to get there. The first few meetings amounted to little more than getting-to-know-you "gab sessions" in which each of us presented a rather foggy vision of what we wanted to accomplish given the resources at our disposal.

Because of the limited amount of research, we had jumped into our L.E.A.F. project with little preparation, making the process of putting the classroom into operation challenging. Choosing several faculty members who excitedly accepted an invitation to teach in a state-of-the-art, technology-rich classroom, our group provided them with a few hastily drawn instructions, then turned them loose to teach. Coming together to discuss outcomes, however, the group realized that we didn't have an assessment procedure. We needed a *process* to tell what to collect from those faculty actually teaching in the L.E.A.F. program and how to access our findings in order to reach our initial goal, creating the most effective learning environment drawing together our respective expertise into a synthesized whole. To construct this process, our group decided to research ourselves to discover what it was that each of us valued in a group experience, then distill these values into a step-by-step approach to collaboration that not only could answer our questions about classroom environments, but also transfer to groups dealing with other areas and issues.

To help us develop this process, we borrowed a survey, then created a series of surveys; in other words, we decided to examine our actual working group rather than study a mix of students in an artificial environment with laboratory-type questions. Thus, the favored method of inquiry was the survey, wherein all eight members of the L.E.A.F. group were asked questions about themselves and their processes that allowed said members to rate and rank the steps. While the Group Preference Scale was found in Larey and Paulus (1999), L.E.A.F. created the other three surveys by first generating them alone, listing and discussing the survey items, and finally individually taking the completed survey by rating each item. Among the surveys are the Group Preference Scale, the Self-Survey, the Process Survey, and the Effective Strategies Survey. Throughout these steps, we defined what we were doing, set forth a recommended process (I.D.E.A.L.) for future groups, and tested it on three groups.

## Survey Results

### *Group Preference Scale*

The first survey we administered to our eight-person group was borrowed from Larey and Paulus (1999). The Group Preference Scale is intended to identify a member's predisposition for working in groups versus alone. The results (1 = *high* to 10 = *low*) are shown in Table 1.

Table 1
**Group Preference Scale**

| *Rank* | *Descriptor* |
|---|---|
| 1 | 1. I enjoy working in groups. |
| 7 | 2. I would rather study alone than in a group. |
| 5 | 3. I believe people work more effectively in groups than alone. |
| 4 | 4. My creativity is stimulated most when I am in a group. |
| 10 | 5. I find it hard to generate novel ideas in group situations. |
| 6 | 6. Working on a task with others makes me work harder. |
| 3 | 7. I find it easy to work with others. |
| 9 | 8. I would rather do a project by myself than seek the help of others. |
| 2 | 9. I enjoy combining others' ideas with my own. |
| 8 | 10. I would rather do a task that can be completed by myself than one that requires involvement of other individuals. |

The ranking of the top six items in Table 1 suggests that the eight group members were predisposed toward a positive attitude about group work. This attitude is reinforced by the bottom four ranked items. Interestingly, when we recruited the members, they were chosen for their expertise, so finding a predisposition for group work was a bonus.

### *L.E.A.F. Self-Survey*

The second group assessment instrument administered, the L.E.A.F. Self-Survey, was intended to elicit what traits members find most important in themselves for the success of the group. The results (1 = *high* to 10 = *low*) are shown in Table 2.

Table 2
**L.E.A.F. Self-Survey**

| *Rank* | *Descriptor* |
|---|---|
| 14 | systemic |
| 8 | student-centered |
| 3 | brainstorming |
| 6 | sharing/educationally supportive |
| 9 | consensus-building |
| 5 | dynamic |
| 1 | synergistic/interconnected/synthetic/collaborative |
| 12 | confident in their expertise |
| 4 | Non-hierarchal/no one leader/all members equal/democratic/co-facilitators |
| 11 | unfearful of social ramifications of the process |
| 6 | communicative |
| 2 | willing to be innovative |
| 10 | collegial community |
| 13 | diverse (race, culture, age, gender) |
| 15 | social networkers |

Interestingly, the top three choices shown in Table 2—synergistic, willing to innovate, and brainstorming—privilege creativity as a key component of a group participant. Again, members were originally selected for their expertise, not any predisposition for creativity. At this point with new teachers in our incubator classroom, L.E.A.F. realized we needed a method to assess their performances. Creating an inclusive observation

rubric that pulled together all aspects of instructor performance (for example, pedagogy, use of technology, communication strategies) became vital. We had to move beyond individual attitudes to a group product, and that action necessitated a process.

### *L.E.A.F. Process Survey*

The third group assessment instrument administered, the L.E.A.F. Self-Process Survey, was intended to elicit what members considered the major components of the group process. The results (1 = *high* to 10 = *low*) were as shown in Table 3.

The results aligned themselves with best practices for group work, confirming the keys to the process of idea generation, as found in the three highest-ranked items, are listening, piggybacking, and letting ideas live initially. The next three items reinforced what we had observed during meetings: giving out written assignments to the community, sort of like assigning homework to our students, produced more effective and smoother sessions.

### *L.E.A.F. Effective Strategies Survey*

The final assessment instrument administered was the L.E.A.F. Effective Strategies Survey. Best practices according to research were broken down into four areas: Creating the Group, Establishing Group Guidelines, Group Processes, and Assessment (feedback and closing the loop). The results of the ranking (with 1 = *most important*) were as shown in Table 4.

The results prioritize as vital to the group's success diverse membership, specific goals, deep listening, and assessment. The most important insight was the emphasis on assessment; had we been doing it earlier, we might have been even more effective. Importantly, the top-rated items formed the basis for our process.

This collection of surveys proved quite valuable in bringing the L.E.A.F. group together, providing both individual and group metacognition—that is, learning about yourself and how you worked best with people from different backgrounds and disciplines created an *openness* that brought us together quickly. The survey results coupled with discussions in a developing common language (for example, piggybacking, perception shift, glimmers) bonded us as well as helping us define our individual roles. As such, the surveys proved formative as well as summative.

More important, is this process transferable—that is, should any group wishing to use brainstorming to achieve its goals utilize the surveys? While the foundational four surveys helped us with L.E.A.F., as we'll discuss

Table 3
**L.E.A.F. Process Survey**

| *Rank* | *Descriptor* |
|---|---|
| 8 | Don't take turns; person with the most powerful insight speaks (defeating production blocking). |
| 2 | Piggyback off info on the table (i.e., use your expertise relevantly/synergize). |
| 3 | Let ideas live initially (i.e., no criticism). |
| 4 | Focus on the idea, not the ideator (i.e., who gets credit). |
| 18 | Speak succinctly (e.g., especially with personal anecdotes; keep them relevant). |
| 7 | Ideas gather strength for inherent worth, not just because many support them. |
| 20 | Pursue "glimmers" in lulls. |
| 5 | Be recursive; don't be afraid to return to earlier ideas. |
| 11 | Don't take negativity about ideas personally or being cut off/overlapped (i.e., low ego). |
| 23 | The major emotion to display is enthusiasm. |
| 19 | Jot down brief notes as others (not you) talk. |
| 13 | Finish each session by summarizing key points and assigning homework for next session. |
| 14 | Meet on a weekly basis at the same time and place. |
| 15 | Prioritize meetings; members should make as many as possible. |
| 1 | Listen to what members say. |
| 16 | Keep the group at 10 or under. |
| 17 | Create an electronic repository for group research/presentations. |
| 6 | Do paperwork (e.g., polls, research, drafting, individual brainstorming) between meetings. |
| 12 | Master "perception shift." |
| 10 | Think of unconventional answers/solutions/insights. |
| 22 | Have no specific agenda for meetings. |
| 9 | Create an end goal, but be multi-goal-oriented. |
| 21 | Be intellectually humble. |

Table 4
**L.E.A.F. Effective Strategies Survey**

| *Rank* | *Descriptor* |
|---|---|
| | **1. Establishing the Group** |
| 1 | Members should be drawn from a diversity of disciplines. |
| 3 | Members should have experience/expertise in the area/problem being addressed. |
| 2 | The group should be composed of both convergent and divergent thinkers. |
| 4 | The group should be composed of members who prefer to work in groups rather than in nominal settings. |
| 5 | The group should be composed of ten or fewer members. |
| 6 | Members should have prior training in group dynamics/idea generation. |
| | **2. Organizing the Group and Setting the Guidelines** |
| 1 | A definite goal(s) should be established for the project. |
| 4 | A definite time and place for meetings should be established. |
| 2 | All members should play an equal role in the process. |
| 2 | All ideas should be initially respected. |
| 5 | Definite boundaries should be established between the group's creative sessions and other activities. |
| | **3. Group Processes** |
| 5 | Members should brainstorm individually before and after group sessions. |
| 2 | Members should be willing to engage in perception shift rather than holding onto fixed ideas. |
| 1 | Members should practice "deep listening." |
| 3 | Members should build on collaborators' ideas. |
| 7 | Members should stay in constant communication. |
| 4 | Members should judge ideas, not ideators. |
| 6 | Members should cede the floor to a collaborator on a roll/in the flow. |
| 8 | Members should be brief. |
| 9 | Members should take notes when not speaking. |

Table 4
**L.E.A.F. Effective Strategies Survey (*continued*)**

| *Rank* | *Descriptor* |
|---|---|
| | **4. Assessment/Closing the Loop** |
| 1 | The group should assess each session informally to monitor progress. |
| 4 | The group should develop formal assessment instruments to administer at the end of the process. |
| 3 | The group should share its findings/conclusions/solutions formally through conference and campus presentations as well as publications. |
| 2 | The group should monitor outcomes of results/suggested actions in the future. |
| 5 | The group should suggest future related initiatives/communities. |
| 6 | The group should make itself available to the campus community for consultation. |

in detail later, sometimes factors, such as the limitations of time, the nature of the goal, and the type of group being dealt with (for example, is it hand-picked, self-selected, or mandated from above?) preclude using all of the surveys. Any group needs to pick and choose, finding the ones most relevant. And there is one shortcut we'll reveal in the next section.

## Creating the Process

Given what we discovered in the series of self-surveys, we set out to create a deliberate process that would combine the best of the "best practices" found in our research with the most pronounced preferences held by L.E.A.F. members. The Chinese have a proverb that has served the two of us well for over 40 years: The beginning of wisdom is learning to call things by their right name. Consequently, we urged the group to name the process, perhaps creating an acronym to suggest its nature. After much discussion, our group arrived at Ideation Development for Excellence in Academic Learning (I.D.E.A.L.). Not only did the acronym fit perfectly with the intent of the process, but it also gave us an easy-to-remember name to use when we discussed the process among ourselves or with others. Refined to its most fundamental and powerful concepts,

the I.D.E.A.L. process contains five essential steps:

(1) **Select a small number of members** (fewer than 10) from a diversity of disciplines, with expertise in the problem/issue area. Being able to choose members always works better than having authority figures (for instance, the dean, the provost) tell you who needs to be included in the group.

(2) **Survey the group** to ascertain the individual and group demographics using the foundation surveys.

(3) **Set guidelines for the group**, including finding a definite time and place, setting a goal(s).

(4) **Train the members in best practices**, such as individual brainstorming before group sessions, deep listening, perception shifting (that is, going beyond prior ideas), piggybacking on others' ideas, judging ideas rather than ideators, being concise in one's contributions, members playing equal roles, initially respecting all ideas, and avoiding interruption of those speaking.

(5) **Assess each session** (formally or informally), develop assessment instruments (for the group itself as well as presentations), monitor outcomes so as to close the loop, create a plan to share results (for example, presentations/consultations on and off-campus, publications), and envision future projects.

## Testing the Process

Now, having a name and the basic components of the I.D.E.A.L. process, we decided to test the results on groups other than L.E.A.F. The first project we undertook was running a problem-solving retreat for our Quality Enhancement Plan (QEP) Coaches. Our QEP (required by the University's accrediting agency) was finishing its second year, and the 20 coaches (out of approximately 580 faculty members) served as our crusaders, bringing the program to the campus's five colleges, 37 departments, and administration.

We started a month before the retreat by e-mailing the QEP Coaches some basic information they needed to study, including the following:

- A Best Practices List (see the "Best Practices in Brainstorming" section).
- The I.D.E.A.L. Process.
- Three Surveys (the Group Preference Scale, the Self-Survey, and the Process Survey).

We asked that the three surveys be returned within a week. Having four major goals—future PowerPoints, New Faculty Orientation, certification, and new coaches training (1, 2, 3, and 4)—to achieve in order to implement them campus-wide in the following year, we divided the coaches into four groups of four to five members (conflicts prevented all coaches from attending) and assigned each coach two problems/issues to consider before the one-day retreat. In our group assignments, the one thing we were determined to avoid was ending up with a group composed entirely of individuals who had indicated in their surveys they preferred to function alone rather than in groups.

When the coaches arrived, we spent the first hour training them, going over the I.D.E.A.L. process, emphasizing key best practices in brainstorming that would be employed in the rounds. In Round I all coaches met with their first group; in Round II all met with their second group, building on what the first group with that problem/issue had proposed as a solution; in Round III we rotated the coaches so that all the coaches concerned with Problem/Issue 1 met and created an action plan, then replicated that process with Problems/Issues 2, 3, and 4.

And in Round I we added a secret ingredient. We knew that it had taken our L.E.A.F. group months to meld and to feel comfortable putting the brainstorming techniques into practice. To speed up the learning process, we actually participated, moving from group to group in order to model the techniques we had learned in L.E.A.F. meetings. By Round II we found that they were starting to pick up these techniques and we could withdraw.

In one sense, the creation of the four action plans that resolved the four problems/issues for the QEP Coaches was proof of I.D.E.A.L.'s success, but after the retreat we also surveyed the participants. In our survey we used a five-point Likert Scale with the following anchors: 1 = *Strongly Agree*, 2 = *Agree*, 3 = *Uncertain*, 4 = *Disagree*, and 5 = *Strongly Disagree* ($n$ = 11). The results are shown in Table 5.

The coaches' satisfaction with the retreat was very high. The coaches' comments supported these positive rankings: "Accomplished a lot in a short amount of time," "Best retreat ever," "I wish all workshops were so effective," "This was my favorite QEP Coaches meeting this year! We got it done and I felt that everyone's contributions were heard and valued," "The best way to really *get something done*," and "Thought it was a very productive meeting that went efficiently but allowed for flexibility and creativity to emerge."

We then used the L.E.A.F. group to present the I.D.E.A.L. approach to some participants in the Commonwealth's Council on Postsecondary Edu-

Table 5
**QEP Coaches Retreat Survey**

| *Avg. Score* | *Descriptor* |
|---|---|
| 1 | The workshop goal was clear. |
| 1.3 | The workshop was tightly organized. |
| 1 | The sessions moved efficiently. |
| 1 | The I.D.E.A.L. process contributed to the goal. |
| 1 | The facilitators contributed to the accomplishment of our goal. |

cation (CPE)-sponsored annual faculty development conference. Because it was a short session, we had to put the participants through the I.D.E.A.L. process quickly, which meant many of our explanations and supporting research had to be omitted. Even though the conferees had not filled out our surveys or had time to study brainstorming best practices, we were able to compensate for these deficiencies by inserting a L.E.A.F. member into each small group (the conferees were arbitrarily divided into four groups). At the end of the presentation we administered another targeted assessment instrument, the L.E.A.F. Presentation Survey, using a five-point Likert Scale with the following anchors: 1 = *Strongly Agree*, 2 = *Agree*, 3 = *Uncertain*, 4 = *Disagree*, and 5 = *Strongly Disagree*. The results are shown in Table 6.

The CPE conference participants obviously had less satisfaction with the I.D.E.A.L. brainstorming process. This variance is most likely due to our not training them beforehand and not having enough time to train during the session. The only comment we received (probably because participants hurried out the door to the next round of presentations) was "Excellent!! Want to learn more."

To further seed the I.D.E.A.L. process into the campus culture and to magnify our CTL's presence, this past year we introduced the process into two new CTL-sponsored learning communities. In our Creativity Professional Learning Community, we brainstormed a multimedia presentation that describes why students will have to be trained in creativity in order to meet the demands of the 21st century. That presentation was used as the after-dinner "speech" at the annual CPE

Table 6
**L.E.A.F. Presentation Survey**

| *Avg. Score* | *Descriptor* |
|---|---|
| 1.3 | My comprehension of the complex and integrated relationship of classroom space, technology, pedagogy, communications, and instructional design has improved. |
| 1.9 | My comprehension of a brainstorming process on an individual level has improved. |
| 1.7 | My comprehension of a brainstorming process on a group level has improved. |
| 1.7 | My comprehension of the pedagogy of effective presentations has improved. |
| 1.7 | My comprehension of the Bloom trait of synthesizing/creating has improved. |

conference and was recycled for our university Office of the QEP in order to train instructors. The brainstorming process was also used by our Faculty Ethics Professional Learning Community to create a comprehensive code of ethics for the University. As the communities are continuing into the new academic year, we have not had time to fully assess them, but preliminary results are excellent.

## Conclusions/Recommendations for Future Study

Brown and Paulus (2002) conclude, "It is clear that unstructured groups left to their own devices will not be very effective in developing creative ideas" and "There are also no controlled studies of creativity in groups or teams in organizations outside the laboratory" (p. 211). While L.E.A.F. and our other learning communities will continue their existence, we have asked ourselves what we have learned so far from our experience and how we can transfer that process most effectively to other problem-solving groups and situations.

We have found in our assessment of all groups that not all the steps can be taken, nor do they need to be. As research has demonstrated, there seems to be a halo effect in brainstorming: When people know they are part of a creative process, they tend to be creative. We have also learned we need to experiment with it using other campus areas. For instance, as

our CTL mentors individuals in scholarship, we will try the process with a group interested in the scholarship of teaching and learning (SoTL). Since our campus is constantly revising its promotion, tenure, and evaluation as well as merit processes, I.D.E.A.L. could be used. Campus-wide initiatives such as our 9-1-1 Project (responding to students in distress), future QEP activities, and program reviews might benefit. In other words, we don't think we have even uncovered the entire tip of the iceberg.

While we firmly believe that I.D.E.A.L. is a productive process that can be taught to various groups, we recognize the need for more formal testing. However, the real-world applications, assessed by both survey and comment data, revealed overwhelming acceptance of the new process, suggesting further implementations are certainly merited. Having this brainstorming process taught and facilitated by our CTL, the only campus entity lacking political ties to other units, positions us at the center of university life. Our independence and the publicized success of the process increase the possibility that other units will attempt the process and our value will grow.

As the process proliferates, our assessment must become more sophisticated, and the more people we engage, the larger our *N*. Importantly, the process will be tweaked. One campus variable that increases our value is that our university's QEP is critical and creative thinking, and developing a creative process utilized across campus will solidify the University's credentials when the accreditors visit us in two years. What we would like these accreditors to see is a situation that clearly illustrates Sawyer's (2007) description of a creative environment: "Brainstorming works best in an organization that enjoys a culture of innovation, an organization where brainstorm meetings are held so often that they're just part of doing business. . . . *Collaborative webs are more important than creative people*" (pp. 74, 186).

Perhaps the most important result of our high campus saturation of the I.D.E.A.L. process is that our CTL's role has been strengthened in the next iteration of the University's strategic plan. We were able to take a list of our well publicized successes to the chair of the campus's strategic planning committee. Our assessments of the I.D.E.A.L. process at various venues provided evidence of its efficacy. Now, as a major thread in the fabric of the institution, the unit's mission has been "officialized," and we have been supplied with additional funding that will provide us with greater opportunity to offer our unique brainstorming process and CTL services to groups across the campus.

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