



PRINCIPLED

Knowing that members of his “Environmentalism in Early America” class had already written countless research papers during their college careers for other upper-level courses, Kyle Dell had a fresh idea.

Dell, an assistant professor of political science who also teaches courses in environmental studies, knew that if he had assigned the students another 15-20 page research paper, it would be replicating something three times over for everyone in the class. So instead, he gave them a challenge.

“Let’s do something different,” he said.

“Something that challenges you and me in a way that produces something meaningful; something that will impact your learning in a way you haven’t had before.”

Dell asked the students, divided into three groups, to produce a short eco-documentary film on a topic of their choosing. In the films, students would address an environmental problem and be charged with translating complex legal and policy issues into a form the average person could understand. And in the process, they would be engaging in interdisciplinary, creative and critical analysis to effect social change.

What happened between the day the students first raised their hands in Dell’s class and the premiere of the films at an environmental studies forum in December was principled problem solving – the central focus of *The Strategic Plan for Guilford College 2005-2010: Creative Leadership for the 21st Century*.

Simply and broadly defined, principled problem solving is an initiative which asks students to focus their abilities and experiences toward solving real-world problems under the guidance of the college’s core values of community, diversity, equality, excellence, integrity, justice and stewardship.

Both the process and the solution result in invaluable educational experiences, which provide students with concrete skills they can take with them into the job market as part of the liberal-arts education they already receive – a “competitive advantage,” as President Kent Chabotar puts it. Originally conceived by faculty,

PROBLEM SOLVING

Guided by core values, students produce knowledge, develop real-world skills

**By Lee Owen
Photos by Julie Knight**



Angie Moore and Kyle Dell
use principled problem solving to challenge their students

“With [principled problem solving], students are producing knowledge instead of consuming knowledge. They’re making decisions to produce something that’s analytical, practical and useful. And I think that’s a really exciting thing.”

— Kyle Dell

staff and students serving on the Strategic and Long-range Planning Committee, principled problem solving will help Guilford and its graduates distinguish themselves in the increasingly crowded educational and professional marketplace.

“Any school can teach problem solving,” Chabotar says. “But what about the principles? Enron solved problems, but I’m not sure they used principles.

“The difference lies in the ‘principled’ part of it. It’s an attempt to organize ourselves to engage the world. We’ll solve

problems, but we’ll approach problems subject to an appreciation for diversity, for stewardship and accountability. Don’t blow a fortune on solving a problem; do it efficiently. Excellence – we’ll do it the best we can, given resource constraints. And equality – there is no status system, except, frankly, through merit and the expertise one can bring to the table.”

And lest anyone think that principled problem solving is a square peg meeting a round hole at Guilford, consider that an inventory conducted last fall by three college

faculty and staff (Professors Adele Wayman and Marlene McCauley and Interim Associate Academic Dean Erin Brownlee Dell) found that more than 45 courses had already incorporated elements of principled problem solving into their curriculum, even before a working definition of principled problem solving was considered by the faculty in October 2005.

“This is the practical, liberal arts approach that Guilford has always had,” Chabotar says. “It corresponds with the Quaker values of engaging the world, of all



Ben Taylor
uses principled problem solving to
engage an interested audience



A working definition of principled problem solving

Principled Problem Solving is a central, unifying theme of the transformative education of the Guilford College curriculum. It uses the knowledge, skills, and life experience of faculty, students, staff and community members to address a broad range of “real world” and other important problems (especially when motivated by student curiosity). This “principled” approach emerges from Guilford’s core values and Quaker testimonies.

The purpose of PPS is to focus Guilford’s mission in both the curricular and extracurricular life of our students towards the practical liberal arts. This commitment requires Guilford students to learn to address problems critically, creatively, constructively, with courage and conscience.

PPS may be approached in one or a combination of the following with these layers building on each other:

- **Foundations:** critical thinking analysis, skills, and values. Guilford students are able to generate valuable questions and approach problems and issues by writing well, making use of quantitative data, understanding historical context, possessing ethical sensitivity, learning from cross-cultural experiences, and combining creativity, imagination and discipline.
- **Practice:** case studies in the classroom. Problem-solving skills are honed and defined through the use of real and hypothetical examples.
- **Application:** real people addressing real world problems.



Ian Breckheimer
uses principled
problem solving to
produce knowledge
with real-world
implications

things civil and useful. And it makes a lot of sense.

“The core values are a filter through which we apply art and music, business and accounting, political science and environmental studies, to solving a problem. In some respects, the core values and principles might be a constraint, since it’s probably easier to be un-principled in problem solving – ‘just do it,’ ‘just get it done.’ But Guilford has a tradition of doing the right thing, not just doing things right.”

Dell says students have a sense that classes and projects which incorporate principled problem solving are much more than busywork.

“With this, students are producing knowledge instead of consuming knowledge,” he says. “They go from experiences where they’re consuming knowledge that someone else puts in front of them in a textbook to actually producing knowledge in the form of research or reports or films or results. They’re making decisions to produce something that’s analytical, practical and useful. And I think that’s a really exciting thing.”

Hands-on learning = valuable experience

The images are familiar from round-the-clock news coverage of Hurricane Katrina: debris strewn across the Gulf Coast, floodwaters covering land as far as the eye can see and the tattered ruins of homes and businesses.

A handheld camera captures the aftermath of America’s costliest natural disaster, one house at a time. A door opens on the screen. In walks the narrator, and the camera points upward to chronicle mold and mildew on the ceiling (a view, missing from many news reports, which lends a human perspective to the depth of destruction the storm unleashed on New Orleans’ residents).

This isn’t a CNN or Fox News broadcast. Instead, the voice which tells viewers, “The ceiling is the worst part,” belongs to Josh Lewis ’07, one of four students in Dell’s class who filmed cleanup efforts and



Abby Blodgett
uses principled problem
solving to address
problems critically
and creatively

interviewed experts on New Orleans' history, why the levees failed and how the city's makeup and the environmental makeup of the area that surrounds it contributed to the problems faced in the storm's aftermath.

Fellow group members **Ian Breckheimer '06** and **Ben Taylor '06** were part of a 24-student team from Guilford which journeyed to Bogalusa, La., in October to assist with recovery efforts as part of a Friends Disaster Service trip, and shot footage for the documentary while there, and **Abby Blodgett '07** taped an interview with a professor from Southern University in Baton Rouge, La., who had relocated to Elizabeth City, N.C., following the storm.

Together, they ended up with several hours of footage, plus hundreds of pictures, to be condensed, edited and pack-

aged into a 17-minute film. All four group members say they learned far more from the experience of making a documentary film than they ever could have by authoring a 20-page report on paper.

"It made us look at the situation in a new way," Breckheimer says. "What can we get footage of? What can we get access to? What story can we draw out of history that is meaningful and relevant to today, and how do we communicate that story to an audience?"

"We had more of an attachment to our work," says Lewis, who was able to gain entry into New Orleans (at a time when it was restricted) with his sister, Katherine, a resident of the Faubourg Marigny District just outside the French Quarter. "We were motivated to make it as good as we could



*Read The Strategic Plan for
Guilford College 2005-2010:
Creative Leadership for the
21st Century online at
www.guilford.edu/strategicplan*



Josh Lewis

uses principled problem solving to capture history on film.

See the films online at www.guilford.edu/envfilms

– because from a personal standpoint, I went through the house, I looked at the city as a whole, I saw the poverty I was surrounded by, and I couldn't not [make the film] the right way. It's one thing to be faced with writing a research paper and just want to get it done, but when you're making something visual, you want to make it as flawless as you can."

The finished product was a success, as were the other two films shot by groups in Dell's class (which examined biodiesel fuels and their impact on North Carolina's future energy consumption, and science curriculum at both public and private schools in Guilford County). The films made their debut in December at an environmental forum which brought together members of Dell's class and participants in Angie Moore's "Introduction to Environmental Studies" course.

Moore, an assistant professor of geology and earth sciences, asked her students to undertake projects which required the use of principled problem solving by identifying an environmental issue at the college and implementing a strategy to improve the situation, whether it was asking students to use less energy in dorms by providing night lights, the installation of waterless urinals in Founders Hall restrooms or cleanup and restoration of neglected areas of the campus.

"It was original work from the beginning," says Moore, who calls principled problem solving a critical part of what she teaches. "Students told us that it was exciting to them because they could see that something they did – as first-year students – made a change on campus. Their level of enthusiasm is higher than anything I've seen. They all had an interest in more than their grades.

"We've given students an opportunity to share something meaningful with the campus and the community through principled problem solving. Without this opportunity, it would be difficult to think of a way to generate that level of excitement, concern and interest. And it exposes students to how the world works. With the waterless urinal project, for example, it was all about the students making connec-

tions – making calls, setting up meetings with the administration and the company that makes the urinals. And because the students took that on, Guilford benefits from the savings [of water and money].”

In cases such as these, quantifiable, physical results are available to go along with the learning experiences gained by students who undertake the projects. But hard data isn't the only goal.

“Too often, you can get a dry, 90-degree angle view of what we do and how students learn so that it fits in tables and is something we can test,” Dell says. “And while that's important so we can achieve the kind of learning outcomes we expect, I think we've seen that learning is improved when students are excited, engaged and enthusiastic about what they're doing. Every one of us approaches learning differently, but when we as learners see something we can get excited about, the learning happens without being forced – without somebody telling us that we have to learn. It's something we take on ourselves and say, 'I want to learn this because I want to, not because I have to.' That's the real difference.”

The future of principled problem solving at Guilford

The college's strategic plan states that “the first two years of the curriculum will focus on providing students with the necessary skills in reading, writing, quantitative reasoning, and creative and critical thinking necessary for principled problem solving.” From there, “the curriculum will involve the analysis of complex problems through the introduction of various interdisciplinary seminars designed to challenge students to understand the systems and structures within which complex social problems tend to present themselves.”

This spring, a search will begin for a director of the Center for Principled Problem Solving, which is scheduled to open in

the fall of 2007. The center will serve as a headquarters for principled problem solving efforts. As faculty, staff and students develop projects, the center will support them in matching ideas with funding or opportunities for partnerships within the community.

Principled problem solving is listed as strategic priority 1-1 of the strategic plan. Strategic priority 1-2 is “The Guilford Challenge,” which “seeks to infuse experiential learning into our academic curriculum.”

Along with a transcript and a diploma, student records would highlight



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Kent Chabotar
uses principled problem solving to improve Guilford's competitive advantage

the knowledge and skills acquired through both curricular and co-curricular activities. Through the program, students will be “challenged to be intentional about their personal development... [and] be transformed by [their] educational experiences.”

“The relationship between PPS and The Guilford Challenge is so close, and it's meant to be,” Chabotar says. “In many ways, The Guilford Challenge is the way we document and organize students' engagement with principled problem solving.”

Principled problem solving may sound like a new idea. Yet at Guilford, the idea of challenging students while guiding them by principles and values is a tradition.

“Lots of schools claim they're changing the world,” Chabotar says. “Some schools do it. But we haven't found another school where the 'principled' part is so important, upfront and critical.”

