

Demand, Drag, or Deal – Persuading Faculty to Transform Higher Education

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ABSTRACT

Rose-Hulman developed a Digital Resource Center to provide faculty, staff and students with access to high-level presentation preparation, web page creation, video digitizing and streaming and other technologies to enhance the institute's ability to provide the best learning and teaching experience possible. The DRC has proven to be an excellent resource for students, and sometimes for the administration. Our challenge has been in enlisting faculty members to use our services. This paper will look at the rationale of faculty reluctance to use our services and how our center is working to overcome this dilemma – demand, drag or deal!

Categories and Subject Descriptors

K.3.1 Computer Users in Education – *Collaborative Learning*
K.3.2 Computer and Information Science Education – *Curriculum*
K.6.1 Project and People Management - *Training*

General Terms

Management, Performance, Design, Reliability, Experimentation, Human Factors.

Keywords

Faculty development, multimedia, technology, teaching, training.

1. INTRODUCTION

Rose-Hulman Institute of Technology was one of the first higher-ed institutions to require all incoming freshmen to purchase a laptop computer. Not only did the students have to purchase a laptop, they had to purchase a laptop and a software suite of OUR choosing! At the outset of this endeavor, we were well prepared to introduce the incoming students on how to use the laptop and the various programs. However, we were not prepared for the breadth of knowledge the students brought with them!

Children now have access to technology at a very early age. As children spend more and more time with computers and other technological devices, they become more technically savvy.

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SIGUCCS'04, October 10–13, 2004, Baltimore, Maryland, USA.
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Therefore, traditional ways of teaching are becoming more difficult to maintain

The Digital Resource Center at Rose-Hulman Institute of Technology was the first entity at Rose developed to assist faculty members in integrating technology into their classroom environment. The Center was developed in the summer of 2001. Its mission is to provide faculty, staff and students with a resource center for high-level presentation preparation, web page creation, video digitizing and streaming and other technologies to enhance the institute's ability to provide the best learning and teaching experience possible. This is a reasonable mission, right? The problem has not been with the services that we offer, it is that we need customers (faculty) to ACCEPT our services!

Many institutions have documented successes in transforming IT within administration, research, communication, and entertainment areas. I have learned that Rose-Hulman is not alone — the core of the academic enterprise: teaching and learning — has yet to be transformed. Student expectations have changed over the last decade. They no longer learn in a linear fashion and they do not like the lecture environment. Faculty must be able to adapt to student's expectations.

2. TECHNOLOGY IN HIGHER ED

2.1 Student Expectations

Students in higher education have certain expectations. These expectations include:

- Show us how to use what we know/what you're teaching us.
- Show us how this works in the real world.
- Show us how this gives us an edge over other students from other institutions.

2.2 Faculty

2.2.1 How Faculty Learn to Teach

Faculty members ARE experts in their field, otherwise known as SME (Subject Matter Expert). However, most faculty members have had little advance preparation for the pedagogy. Faculty learn to teach by engaging in "action research" as depicted in Figure 1: planning a course of action, enacting their plans, observing the effects, and reflecting on the results so they can be modified.

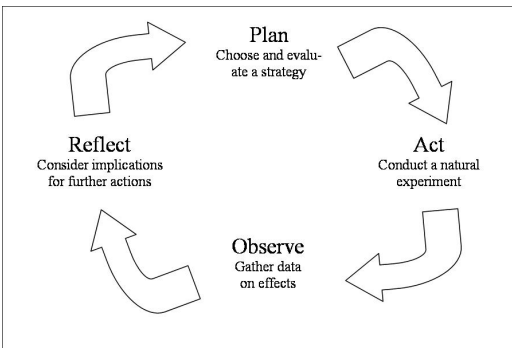


Figure 1 Faculty Learning Cycle

The experimentation of this model ensures that the learning is authentic, and the observation and reflection ensure that innovation is monitored and adapted to suite the needs of the course. However, many faculty members are unfamiliar with the concept of adding additional technology to their subject material and how best to do so.

2.2.2 Faculty obstacles:

- There is not enough time.
- It is too complicated.
- Faculty wants to concentrate on research in their field.

2.3 Technology and the Curriculum

New technology doesn't always mean BETTER technology for each particular class. The course curriculum should determine the technology needed, not vice-versa. For example: What are the student learning outcomes? What should students be able to do—and at what level—when the course is complete? When a faculty member is able to answer these questions, then he/she will be able to determine what technology will help the students accomplish the learning outcomes.

2.3.1 Transformation of IT in higher-ed:

- The use of modern technologies offers our institutions the opportunity to increase modern pedagogy into its teaching.
- The best learning techniques are socially and physically interactive.
- Faculty NOT exposed to pedagogy use technology for efficiencies, while those who understand pedagogy are more apt to use technology for CHANGE!
- Faculty need to feel that the change is THEIR idea!

2.4 Support Personnel Issues

The support personnel's role is to take into account all of the above issues: student expectations, faculty concerns (and their learning cycle), and technology and the curriculum.

3. THE FACULTY LEARNING CYCLE

Faculty support personnel must consider common approaches to faculty development in using instructional technology and how best to apply technology within the four phases of the learning cycle.

3.1 Reflecting

During the phase of the learning cycle, faculty considers the effects of their current approach to teaching. Some faculty may be bored with their current style; some may feel a need to revise based on student evaluations. There is a vast number of explanations why a faculty member may wish to revise his/her current method of teaching. The main thing is that the FACULTY MEMBER must perceive an instructional need!

Peer support is important for sustaining motivation during this phase of the cycle. Reflection is not a solitary activity; it is enhanced in a social environment, which can be enhanced by faculty learning communities, teaching circles, or teaching and learning groups. Administration's support of faculty revision methods is critical (adequate time for reflection, support units available, recognition by administrators).

3.2 Planning

Once a faculty member has addressed the need from the reflection phase, he/she can consider future teaching methods. Faculty support personnel can assist in the phase by providing information and support that may assist the faculty member in determining the effectiveness of new models.

3.3 Acting

Faculty's work is influenced by their levels of energy and commitment, their sense of support from the academic community, and their tolerance for risk. Many faculty have prematurely abandoned new teaching approaches if they lack the drive, skills, support, or time needed to devote to the new procedure. Faculty development support activities are critical at this stage if the cycle is to continue.

3.4 Observing

Faculty learns of the effectiveness at this point in the cycle. Data is generally gathered via course evaluations.

4. THE PERSUASION FACTOR – DEMAND, DRAG, OR DEAL

The fifth-ranked issue in the "Current IT issues for 2004" in the fifth annual *EDUCAUSE Current Issues Survey* is faculty development, support, and training. This article states that "Colleges and universities commonly provide faculty with easily accessible resources for the continuous learning through faculty-development programs." So why is this such a big issue?

The IT area must provide a proactive approach to assisting faculty members transform higher education. Support centers/personnel must be available to provide the following:

- Have resources available – provide training.
- The support personnel need to learn the pedagogy business and share it with faculty.

- Faculty support personnel need to learn more about how people learn in order to assist faculty.
- Find a way to encourage faculty to utilize technology. This effort must be supported by the Dean and could possibly utilize a tenure based reward structure.
- Showcase solutions – host faculty sharing seminars.
- Require consultations and training.

The following are suggestions on how faculty support personnel can assist in faculty in transforming the learning environment:

- Develop a strategic plan for transforming learning and teaching.
 - This may include a monetary investment in faculty member training, as well as faculty support personnel training.
 - It may include collaboration with other units within the institute, i.e., Deans Office, Assessment Office, IAIT in general, etc.
- Take a leadership role in encouraging faculty members to experiment with innovative models of instruction.
- Work with a Course Management team to develop training for faculty members on the usage of the CMS.
 - This should include training on pedagogy and incorporating multimedia into the classroom.

5. CONCLUSION

As Project Manager at Rose-Hulman, I witnessed limited success in faculty development during the first two years. I struggled to get faculty members to even notice our existence! Faculty events were held (open houses, afternoon teas, and showcase lunches). At all of these events, we would highlight projects that which had been completed. Often times, I would develop a multimedia project without the faculty members knowledge based on course material I found on the course web pages.

During this past year, the hard work has started to pay off. Faculty members are beginning to take notice and often pop-in to request assistance as the need arises. Beginning in summer 2004, we will also be working with the Course Management Team. The Digital Resource Center will now have a chance to meet with all faculty members to discuss transferring (and hopefully, transforming) their course material to the web.

6. REFERENCES

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