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MANAGING SMALL-BUSINESS/ UNIVERSITY IT PARTNERSHIPS

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Abstract

This paper discusses the management of small-business/university (SBU) partnerships developed by the Institute for Technological Innovation. It addresses the managerial and technological issues for each SBU partnership in the USA and Europe.

Keywords: Small business, university partnerships, partnership success factors

Introduction

The Institute for Technological Innovation (iTi) is an outreach organization integrating business savvy with computing and engineering knowledge. Formed under the sponsorship of Florida Gulf Coast University's College of Business, iTi provides the resources and project-ideas for supporting the College mission—within 'second circle' framework—that bridges the university and the domestic and international community in a technologically advanced and rapidly changing global economy. The sections below discuss the on-going SBU partnerships as well as the management challenges and opportunities.

SMPU E-Learning Program

SGMI, a small Swiss company, and FGCU joined forces to offer an exciting e-learning program for German-speaking executives (see Fig. 1 and <http://itech.fgcu.edu/cis/sgmi/>).

Briefly, the characteristics and challenges of this unique e-learning program are:

Bilingual Fluency: Under this partnership, FGCU business faculty teaches America's best business practices to German-speaking participants in both English and German. The challenge has been finding comparable textbooks in the German language. Therefore, we have had to provide substantial content on the web—including translated transparencies with narrations (Figure 2).

Business model: A new revenue model was developed for this activity. As illustrated in Figure 3, the model provides incentives for faculty, university and its partners.

Dual university certificate: The program leads to an International Management Certification awarded by both SGMI and FGCU after the completion of nine (9) modules. The challenge was to design a short program that broadly covers the management material plus the tools needed to succeed in the IT world. Below are the main topics.

1. **E-Methods/Tools** (<http://itech.fgcu.edu/cis/smp/emethods.html>): Analyzing business problems and communicating solutions, using information-technology tools and strategies, is an essential endeavor in the information-age. This course-module reviews tools, principles and methodologies needed to maintain a competitive edge in the global marketplace.



Figure 1. SGMI E-Learning Program: Home Page

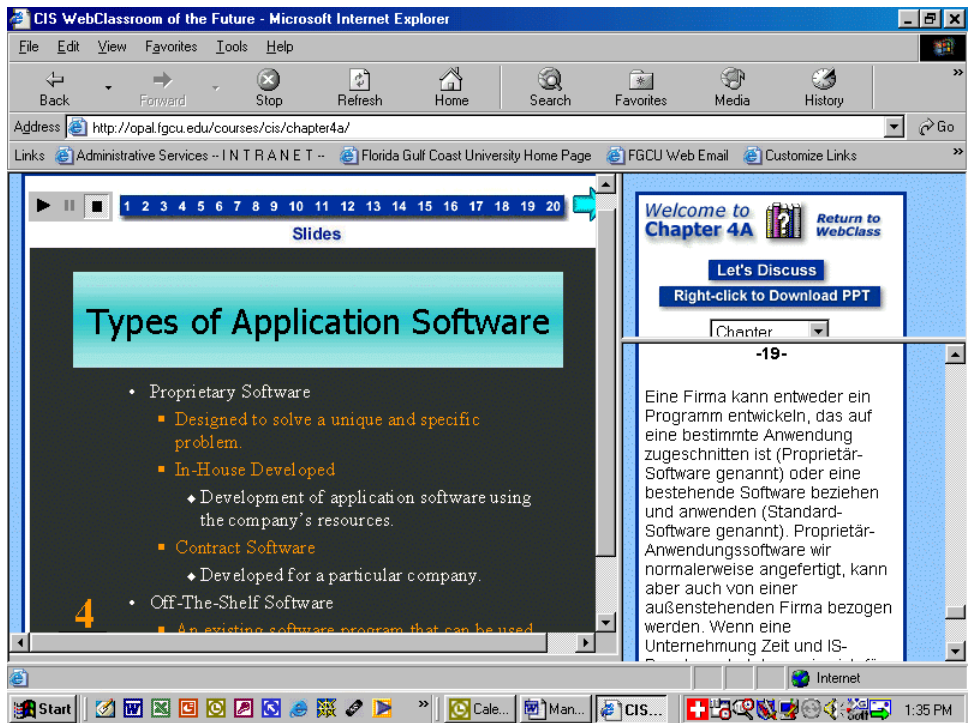


Figure 2. Slides with Accompanying German Translations

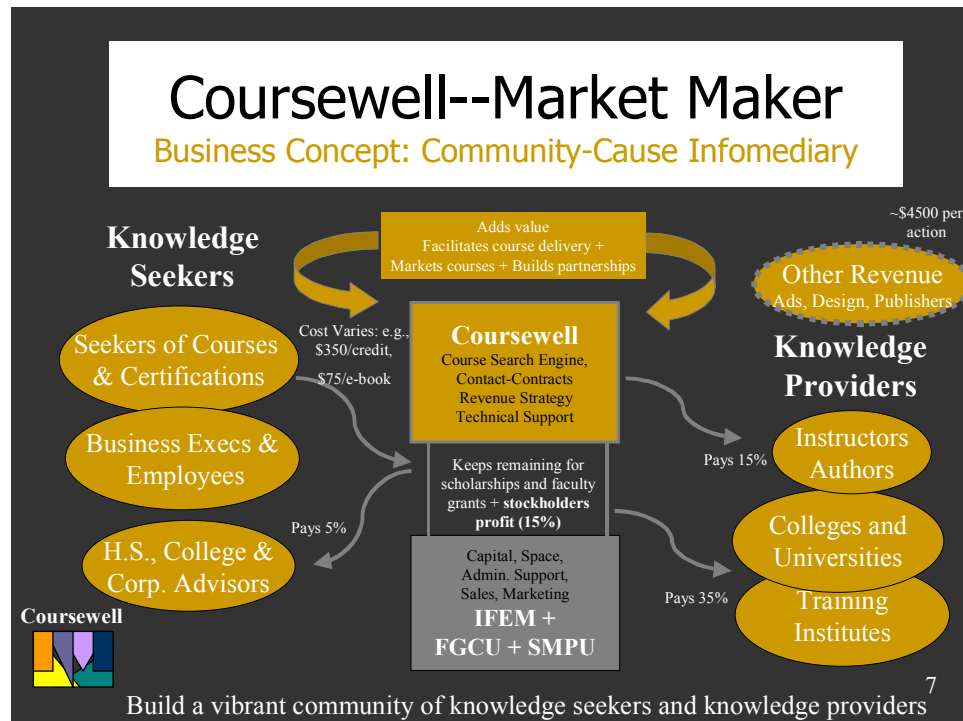


Figure 3. Coursewell E-Learning Business Model

- E-Strategy** (<http://itech.fgcu.edu/cis/smp/estategy.html>): This module explores the differences between the various types of business systems and its use to increase productivity. Participants will learn that organizations can achieve the scale, scope, and efficiency that comes from being large and the flexibility, speed, and responsiveness of being small. The course discusses Harvard University Professor Michael Porter's Industry and Competitive Analysis Framework; the importance of core competencies; and analysis of the value chain for finding business opportunities.
- E-Business** (<http://itech.fgcu.edu/cis/smp/ebusiness.html>): Despite the "chaotic" e-commerce environment, pioneers like AOL, Dell, eBay, Monster.com, Travelocity, Schwab, and many other companies maintain profitable e-business operations. This course-module explores why some e-businesses fail while others succeed. Participants will apply IT strategies and e-commerce best practices in the design of their own Internet-based enterprise including on-line presentation of e-business plan and creation of a Web resource using Microsoft's PowerPoint, Front Page, or html coding.
- Marketing** (<http://itech.fgcu.edu/cis/smp/emarketing.html>): This course is concerned with the adaptation of resources and objectives to outside market opportunity. It covers strategic planning, segmentation, positioning, marketing mix development, and relationship marketing among other viable topics. The textbook is written by Philip Kotler one of the best writers in the field of marketing. The text will be supplemented by mini-lectures and discussion questions, and cases will be pre-analyzed in a team setting and discussed in a synchronous format. The cases address topics in segmentation, sales, advertising, and the internet, as well as many other strategic areas. Through the taking of this course, the student can expect to conceptualize marketing issues and to make viable marketing recommendations.
- Global/Legal** (<http://itech.fgcu.edu/cis/smp/globallegal.html>): Knowledge of the international legal environment is essential for anyone working in today's business world. This course focuses on both U.S. and European Union legal environments. Some of the topics covered include the legal environment in common law countries, regulation of international business transactions, technology transfers, dispute settlement (litigation and arbitration), and legal issues in doing business in cyberspace.
- Economics** (<http://itech.fgcu.edu/cis/smp/economics.html>): This introduction to economics is focused on four fundamental aspects of economics. The first week covers markets and prices. The focus is on an understanding of market systems,

efficiency and market failure. The second week is focused on costs of production within the business enterprise. The third week addresses demand by consumers. And during the last week, we will cover basic welfare economics including the gains from trade and the role of government in markets. This Internet course provides a brief, but concise, treatment of each of these issues.

7. **Leadership** (<http://itech.fgcu.edu/cis/smp/leadership.html>): This course engages students in a variety of activities designed to enhance their understanding of the challenges which confront today's business professionals. In addition to specific skill development in the areas of problem-solving, motivating others, leading teams, and goal-setting, it will include models for examining personal career paths, leadership styles, ethical decision-making, and a leader's role as organizational change-agent.
8. **Fundamentals of Financial Management** (<http://itech.fgcu.edu/cis/smp/finance.html>): The purpose of this course is to provide the student with a foundation to make economically sound decisions regarding financial management. Topics to be covered include the time value of money, risk and return, cash flow principles and capital budgeting decision techniques. Students completing this course component should have the tools and prospective needed to accurately analyze capital investment decisions.
9. **Operations** (<http://itech.fgcu.edu/cis/smp/eoperations.html>): This course covers business operations management and value chain analysis. It explores the series of interdependent activities that bring a product or service to the customer.

Web Classroom of the Future

Figure 4 shows the course management environment developed for the program.



Figure 4. Web Classroom of the Future

The environment was developed to deliver a web-based information systems (IS) course as well as the first three modules in the e-Learning Program (Rodriguez, 2000.) Students in this web-based course learn to leverage information technology for business

purposes: creating, developing and overseeing the computer and communication systems and networks used in managing products, processes and services. The result is information that improves organizational and customer service, increases customer loyalty, expands business opportunities, creates new products and services, and makes the whole enterprise smarter and more efficient. For instance, students learn to: develop electronic workgroups to unite workers in satellite offices use the Internet or intranets to gain competitive advantage throughout the value chain improve the quality and effectiveness of organizational and operational processes assist the accounting, human resources, engineering, marketing and sales departments facilitate communication with the internal and external customers develop web-based businesses or, even, course-management resources like the web classroom.

Most important characteristic: Within the Web Classroom of the Future paradigm, the instructor serves as facilitator in the learning process: creating exciting learning opportunities for the students; assigning readings and challenging projects; and assessing student work and stimulating participation. Students are active participants in the learning process: reading assigned chapters and analyzing cases (by due date); participating in discussions (via e-mail, chat rooms and electronic bulletin board); and submitting assigned problems/projects/exams per course schedule.

CREW: Workgroup Technologies

In addition to e-learning applications, iTi developed web-based system to enhance collaboration among small construction companies in the area. This was developed under a National Science Foundation—sponsored project titled *Computer-based Review and Evaluation for Workgroups* (Figure 5). CREW (<http://crew.fgcu.edu>) allows contractors to review and evaluate construction projects via the Internet.

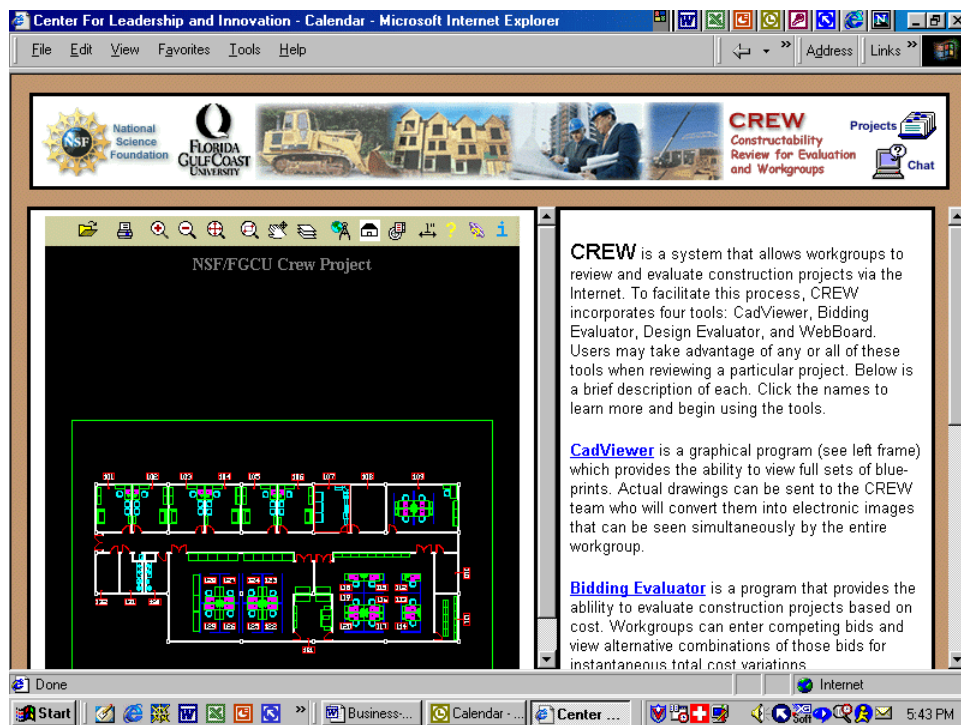


Figure 5. CREW User Interface

To facilitate this process, CREW incorporates four tools: CadViewer, Bidding Evaluator, Design Evaluator, and WebBoard. Users may take advantage of any or all of these tools when reviewing a particular project. Below is a brief description of each.

CadViewer is a graphical program (see left frame) that provides the ability for each small-business partner to view full sets of blue prints. Actual drawings can be sent to the CREW team who will convert them into electronic images that can be seen simultaneously by the entire workgroup.

Bidding Evaluator is a program that provides the ability to evaluate construction sub-projects based on cost. Partners can enter competing bids and view alternative combinations of those bids for instantaneous total cost variations.

Design Evaluator is a program that provides the ability to evaluate collaborative designs. Geared toward more experienced users, it provides the ability to rate important criterion and reach consensus through a system of voting. Visual animations allow the partners to view designs in 3-D.

Web Board is an online bulletin board that provides the ability to post messages and attach documents. Real-time chat rooms are also available through the Web Board to foster participation with the small-business partners.

The unique characteristic on CREW is that it allows sharing graphic information and decision analysis among partners. The challenge is the need for a large monitor to display both the graphics and the decision-making tools. Also, small businesses used to have various incompatible systems but know with a web application they can collaborate more readily.

inSTEP: National Institute for Software Testing and Evaluation

Currently, the Institute for Technological Innovation is developing a new venture to conduct research, training, and/or sponsored project in software security with Harveysoft.com, a small business in Southwest Florida. The project is briefly described as follows:

In coordination with Harvey Soft Inc. (a small software developer), the Institute will write three self-supporting grant proposals to support their enterprise.

Develop a research-lab for software development, testing, security and application service provider that can be shared by other small businesses in the area.

Develop an Internet-based security certification program for small developers.

Develop an Application Service Provider (ASP) and security demonstration and consultative. Other small business partners will share applications.

Unique characteristic and challenge: The private sponsor must agree to pay the university a fixed price sum payable upon execution of the agreement plus participation in the “profits.”

Current Activities/UnderDevelopment

The Institute current developmental activities consist of the following projects:

Global E-MBA Program, scheduled to start in spring 2004, will deliver an AACSB accredited Executive MBA program to participants in Germany, Switzerland and Austria via Internet as well as value-added onsite experiences. Details for this program are being developed at <http://www.fgcu.edu/cob/gemba/index.html> (Figure 6). Some distinctive features include international recruiting; collection-of-tuition by a third party; and onsite seminars and experiences in both Europe and USA.

Unique characteristic and challenges: The first class is being recruited by SMP University in German-speaking countries as opposed to Florida Gulf Coast University traditional English-speaking and Spanish-speaking service area (Southwest Florida). The anticipated challenges are: (1) marketing a master’s degree to individuals that do not hold traditional USA-based degrees; (2) Complying with stringent requirements, i.e., GPA, GMAT, etc; and (3) technology proficiency.

Computational Bidding Linguistics Project, scheduled to start in summer 2003, consists in developing a system for a performance-marketing company using Joint Application Development (JAD) and Rapid Prototyping Development (RAD). The system will automate the recognition of plurals and misspellings when customers enter a bid or search request.



Figure 6. Global EMBA Program Home Page

Unique characteristic and challenges: The anticipated challenges are: (1) it will be the Institute's first commercial development effort in partnership with a company; (2) Although faculty is experienced in problem identification and algorithm development, they are relatively inexperienced in commercial code development.

Conclusions

This paper briefly discussed the Institute for Technological Innovation's ongoing partnerships with small businesses in US and abroad. The partnerships range from developing the bilingual *SGMI e-Learning Program* to the *Web Classroom of the Future* (for training employees at an IT firm) to collaborative research projects like the *National Science Foundation's CREW system* and the *Center for Software Testing and Evaluation/ASP Lab*. New emerging projects such as the Internet-based Global EMBA Program and software development expand the entrepreneurial role of the Institute to new levels. Each partnership brings different opportunities and challenges to be expanded during the presentation. In most cases, the challenges are related to growing pains such as coordinating multiple projects with very limited staff to adjusting to a new environment. Nevertheless, the agile nature of the Institute with its ability to form targeted workgroups over the Web for each project assures its success. Other critical success factors include: (1) Selecting a partner that complements the university's core competencies; (2) Educating partner on public-university constraints (Farrell, 1997); (3) Keeping the Magic in Motion (Bell, 1999), that is, continuously innovate and adjust to your partners needs/wants; and (4) Having a clear exit clause that allows contract cancellation when needed. The author will seek feedback from the participants, as he presents each project. A good question to ask is: What would you have done differently?

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