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EXAMINING PROGRAM MANAGEMENT IN BUSINESS SIMULATIONS: STUDENT AND FACULTY VIEWS

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ABSTRACT

The State of Florida legislature directed universities and colleges to develop key Student Learning Objectives (SLO) to meet new Academic Learning Compacts. One state-designated learning domain is for students to demonstrate a course's project management SLO. At our university, faculty and students are project managers with both groups performing academic activities to attain goals such as tenure and promotion for faculty, and graduation for students. To accomplish these goals, both groups complete a series of requirements requiring program management skills. For students, a required course in business policy allows students to participate in a business simulation. For instructors, service efforts such as developing rubrics to evaluate learning domains like project management are accomplished. This paper details a student team's self-initiated project management approach integrating techniques learned in the College of Business (COB) into a method for implementing business strategy. Their approach is reviewed and analyzed in light of a newly developed faculty rubric to measure the project management SLO.

Key Words: Experiential, Project Management, Assessment

INTRODUCTION

The 2005 fall semester has already begun with the additional excitement of faculty being asked to evaluate and assess the academic engagement of students. This is the result of several university- and college-level directives coming from a recently successful Southern Association of Colleges and Schools (SACS) accreditation process and pending AACSB re-accreditation efforts. One such directive has state universities and colleges implementing a series of Academic Learning Compacts (ALC) with one being the assessment of students' project management capabilities. A colleague and I are developing a "project management" rubric assessing this learning outcome in our COB's capstone course: MAN4720 Business Policy and Formulation. One of this course's key evaluation components is an experiential learning approach using a business simulation

Recently, as the simulation's individual rehearsal and team practice rounds were nearing completion, the Integrated Solutions (IS) team asked us if we would like to see the team approach they developed themselves for making decisions. Sounding very much like this could be a

student-developed plan for the project management SLO, IS was asked to write up their ideas for comparison against measures being created by the course faculty to judge and measure a student's project management abilities. The objectives of this paper is to 1) broadly describe the development of ALCs and SLOs impacting courses being offered, 2) offer a student's designed perspective on the team's program management process, and 3) provide a faculty perspective and rubric to measure ALCs like project management. What is interesting is that one can see what students believe to be the important project management behaviors required for them to complete the simulation successfully. As a results, this can then be a great way for course instructors to see if their designed metrics capture important project management factors from both an instructors' and students' perspective.

HOW DID WE GET HERE?

In summer of 2004, the State Board of Governors adopted policy resolutions requiring all state universities to implement ALC for baccalaureate and graduate degree programs. The ALC must identify, at a minimum, the expected core student learning outcomes for a graduating student in the areas of content/discipline knowledge and skills, communication skills, and critical thinking skills. In addition, corresponding assessments (rubrics) need to be identified and developed to determine how well student learning matches the articulated expectations (Board of Trustees – Academic & Student Services Committee Meeting, August, 2004).

At our university, each baccalaureate and graduate degree program is expected to present program-level ALC core student learning outcomes for each of the following domains:

- Content* – concepts, theories, and frameworks of the discipline.
- Critical Thinking* - information management, higher-level cognitive skills, problem solving, creativity.
- Communication*/Literacy – written (reading and writing), spoken (listening and speaking), quantitative, technological, and other communication skills as appropriate to the discipline.
- Integrity/Values – decision making, academic integrity, professional standards for discipline integrity.
- Project Management – project planning and execution pertinent to the discipline.

  In addition, degree programs may present student learning outcomes representing
- Discipline Specific Skills – special outcomes that distinguish program completers not identified in the five domains listed above.

* Note areas required by the Board of Governor's policy (Quality Enhancement Plan, January 2005).

PROJECT MANAGEMENT: WHAT DO WE MEAN?

The "project management" student learning objective is one SLO needing more formal defining since becoming a state Board of Governor's directive. Specifically, the corresponding assessments or rubrics must be identified to determine how well student learning matches the articulated expectations. A more thorough definition of successful project management must be developed because success is not simply completion of course work. Presently, the COB is working to improve embedding of project management skills throughout the entire curriculum.

MAN 4720 is the capstone course in the COB curriculum thus making it the logical format to assess the program management skills of graduating students. MAN 4720 currently includes a Total Enterprise Simulation called Capstone Business Simulation (Capsim) by Management Simulation, Incorporated as a key experiential learning element of the course. This capstone policy course is developed around basic strategic management theory, a simulation, and the college's directed ALC learning domains. Peach (1996) uses Wellington & Faria's (1995) research findings that show a positive relationship between simulations and strategic management. Strategic management exists when a simulation team develops clear goals, performs external and internal environmental analysis, introduces clear strategies, monitors performance, and takes corrective action (Peach, 1996). Because the simulation reflects all aspects of managing a firm in a competitive environment, it requires students to exercise program management skills to ensure all components are accomplished in an effective and timely manner.

A project is defined as "a one-time only set of activities with a definite beginning and ending." (Robbins & DeCenzo, p415, 2004). Project management in this course is defined as "the task of getting the activities done on time, within budget, and according to specifications" (Robbins & DeCenzo, p415, 2004). Typically project management includes three phases: planning, scheduling, and controlling (Heizer & Render, p56, 2004). Based on these definitions, we are presently creating a new rubric to measure a project management component for student teams. The question is, how are student teams accomplishing project management dimensions in simulation projects without being directed how to accomplish the management of simulation activity? Can/should student thoughts on what they do be integrated into the project management rubric under development?

PROJECT MANAGEMENT: A STUDENT PERSPECTIVE

Integrated Solutions (IS) provide an interesting approach for handling their simulation's project management dimension. The MAN4720 Capsim simulation involves three stages of student participation. Initially, individuals participate in several rehearsal rounds to gain a

basic understanding of how the simulation operates. After the rehearsal rounds, three to four students form into self-selected student teams to compete in the Fall 2005 Capsim. The newly organized student teams then participate in four practice rounds intended to allow each team an opportunity to plan, organize, and execute an overall business strategy and simulation approach.

When four practice rounds are completed, student teams then participate in a series of eight final rounds. In the final rounds, team business decisions and strategies are put to the test against teams from the class and a set of computer team players. Each student team is evaluated on a round-by-round basis, based on a series of company performance factors.

Each student team operates as a company that produces sensors that measure the environment such as temperature, speed, and flow. The market is comprised of five major segments: traditional, low-end, high-end, performance, and size. As each round advances, teams must develop strategies and make business decisions in three areas of operation for each market segment/product line: R&D (research & development), marketing, and production. In addition, teams must also develop a general strategy for making financial decisions for their sensor company as a whole.

The educational purpose of Capsim is to integrate the knowledge and skills learned from the COB's multiple business disciplines into one practical exercise. In general, the business policy course and Capsim offer a glimpse of real-world business operations to students, sometimes for the first time. To be successful, students must plan, organize, schedule, coordinate, analyze, re-analyze, and, above all, communicate. There is no other set of skills more important than these for any career, in any field.

The university catalog describes the business policy analysis and formulation course as "aggregate planning and development of overall policy for organizations. Emphasis is on the system interrelationships of the functional areas of enterprise from the viewpoint of top executives" (Online Catalog, 2005). As COB seniors, our team took this description literally. On the first day of class, we entered not as students but as executives of the IS Sensor Corporation.

The IS Management Process – Student perspective. The conceptual management process can be broadly defined as "the application of planning, organizing, leading, and controlling to the achievement of objectives" (Heizer, p6, 2004; Schemerhorn, 2003). As business students, we know and can recite this definition verbatim from memory. Each of us has been through the same series of business prerequisite courses where we had been inundated with the conceptual management process. Our current situation, however, requires not just the recursive regurgitation of the conceptual management process, but the actual implementation of it. Armed with the knowledge of past courses and experiences inside and outside the classroom, we approached the Capsim not as a means to an end, but as a challenge. Our mindset totally engaged a four step management process for IS: 1) accept the challenge, 2) focus on the learning process, 3) work together, and 4) be successful (Figure 1).

Step 1: The first step in our management process is "accepting the challenge." Our primary criticism of the conceptual management process is its lack of practicality. Although the process adds a series of rigid boundaries for managers to follow in order to pursue organizational objectives, it fails to communicate effectively the true nature of real-world project management. Before starting any project, a team must know and understand themselves and each other.

To begin a process of managing a project, a manager must accept the challenge(s) unique to that project (Figure 2). Acceptance takes interest, understanding and, above all, planning. Acceptance of the challenges embedded in the Capsim requires more than simply enrolling in the business policy course. Acceptance requires students to have an above-average interest in business disciplines, an understanding of those disciplines, and the willingness to bring those learned principles to life through strategic planning.

Acceptance requires us to know ourselves individually and to know each other. This process is assisted by gaining social familiarity with one another from past educational experiences. IS team members share a similar academic major: accounting. This gave us the opportunity to enroll in many of the same courses from semester to semester. IS realized early in our academic careers how well we fit and work together as a team.

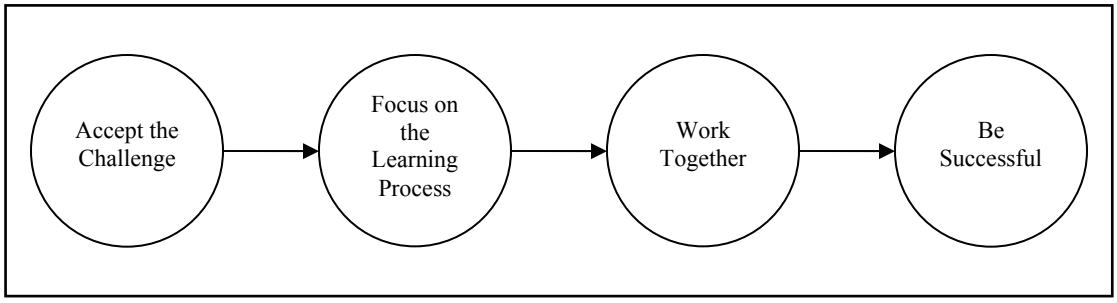


Figure 1 – The IS Management Process

The diverse range of interests, strengths, weaknesses, and proficiencies were easily identified from prior classes and social interactions. Approximately 18 months prior to taking the business policy course, IS began to discuss the possibility of forming a student team for the course's Capsim. This level of advanced planning, in our opinion, was invaluable to accepting the Capsim challenge, thus initiating the first stage of our management process. IS' accepting the challenge involved many informal and formal meetings. Lengthy discussions with other students concerning the nature and requirements of the COB's policy simulation were done individually to gain an understanding of Capsim. In doing so, we evaluated each other and how each would play a role in meeting the challenge.

Once these inherent and very basic tasks were performed, we began to develop our team approach for dealing with Capsim. It is important to stress once again the importance of "planning for acceptance." Planning was a very foundational component for our accepting the Capsim challenge. Following the advice of an old proverb, "don't put the cart before the horse," we viewed planning as integrally related to understanding.

The IS planned approach involves the formal analysis of the Capsim's sequential requirements. Each Monday morning, the weekly decisions must be submitted to the Capsim website. Thus, the team needs to meet at least weekly, if not more, to plan and execute our strategic decisions. However just as the business policy course is the culmination of our business studies, our weekly strategic execution meetings also culminate our individual weekly activities. Each team member accepts responsibility for the analysis of one strategic area: research and development, marketing, or production, in a rotating fashion to give everyone an opportunity work in each area. Team members then analyze the various aspects of their accepted area of responsibility, investigate competitor methods and decisions, and then present their analyses to one another at the weekly strategy meeting. After presenting the analysis to one another, all team members now possess the same level of understanding about IS' current Capsim position. Therefore, we are now prepared to plan the next series of general strategic decisions.

Step Two: The second step of the IS management process is focusing on its learning process (Figure 3). The policy analysis and formulation process, as it relates to the Capsim, is very reiterative. It is a process, not just "winning" against competing student teams, but of learning through the application conceptual knowledge gained from a COB educational experience. From the basic management functions, this process can be labeled as performing the organizing function (Schemerhorn, 2003). For the IS team experience, its organizing activities all focused on using the knowledge and skills learned from past COB courses and experience. The accounting, finance, statistics, operations management, and economics disciplines are all utilized when organizing activities in our plan and executing the strategy. After completing the first step of our management process and determining where IS wants to go in Capsim,

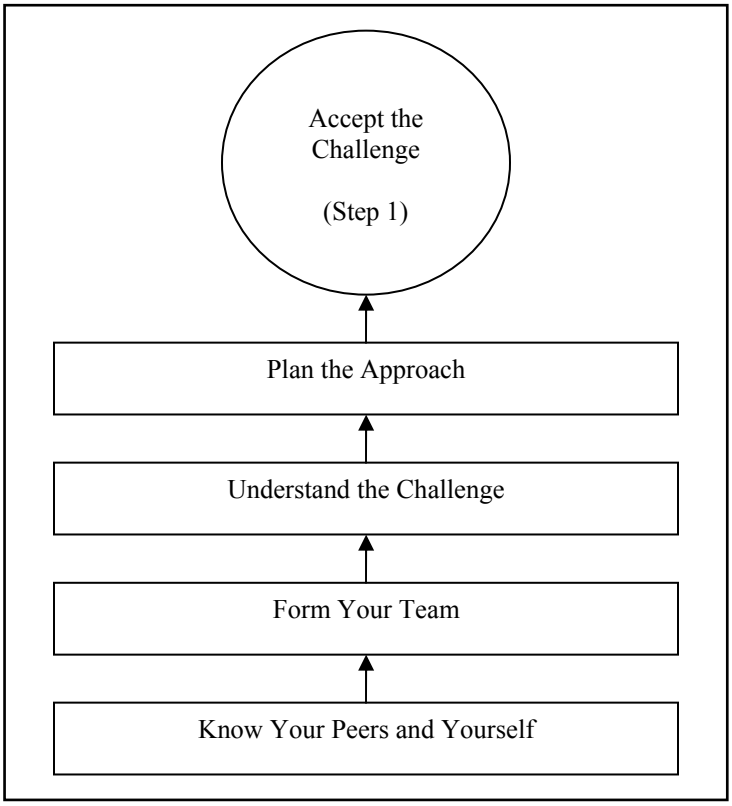


Figure 2 – Accept the Challenge

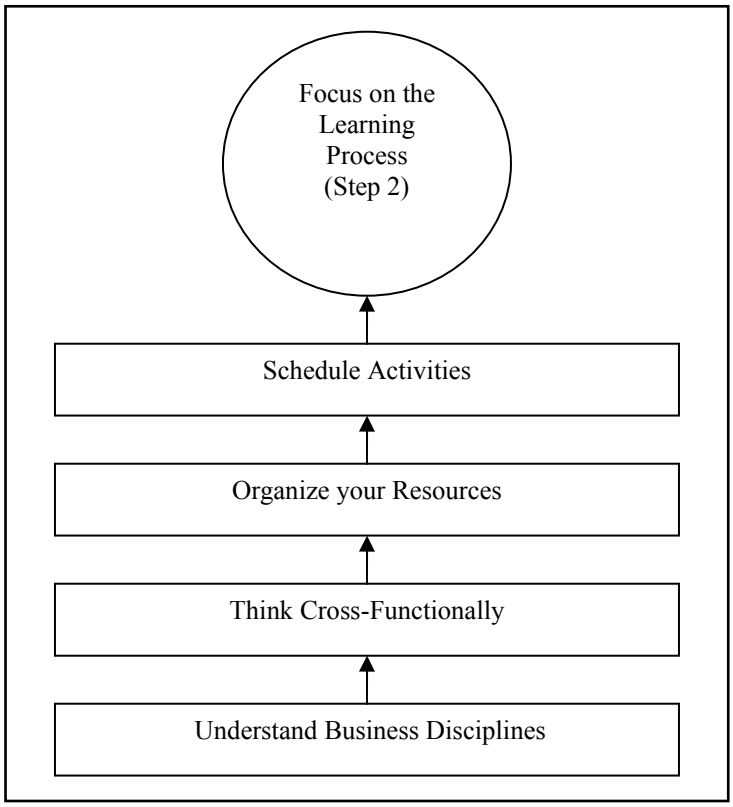
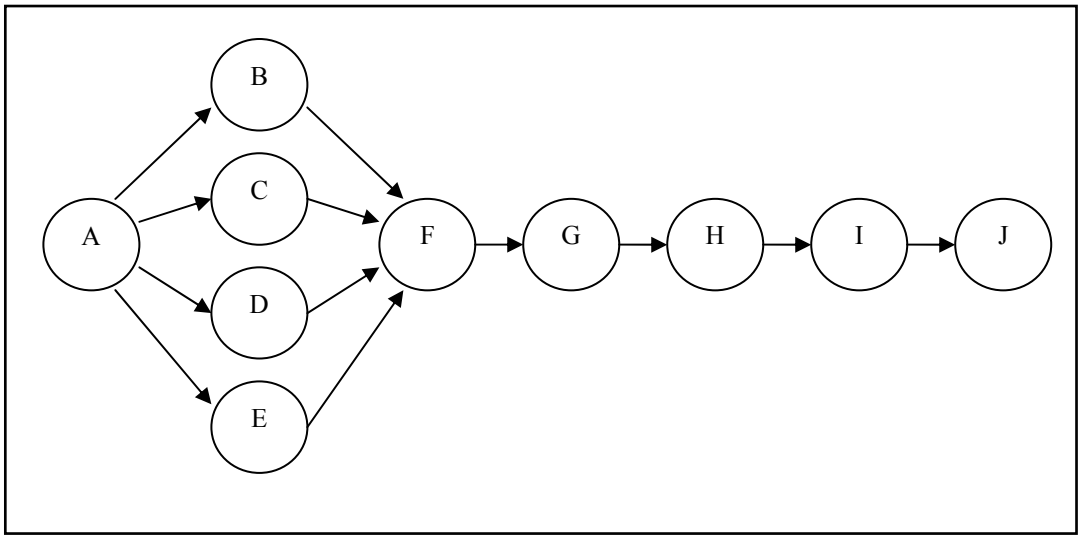


Figure 3 – Focus on the Learning Process

we began to think cross-functionally, organize our resources, schedule our activities, and focus, albeit indirectly, on our learning process.

Each component of this management process step deserves special attention. In order to focus on our learning process in the Capsim, the team must know and understand the business disciplines presented in COB courses. IS gains this understanding by completing the college's undergraduate course requirements as it moves toward graduation. Courses in management, marketing, accounting, finance, economics, statistics, and mathematics are required for all COB business majors conveying the required understanding of business disciplines.

Much more than just understanding each individual discipline's concepts, this step in our management process requires the team to think cross-functionally. No longer can IS focus on the subject matter of each discipline alone. To grow our learning process, the team had to integrate all the disciplines into a common strategy. Once IS began to think cross-functionally, our team was able to proceed and organize our resources.



Activity	Description	Predecessor	Time (days)
A	Result Evaluation Meeting	-	0.50
B	Decision Analysis - R&D	A	2.00
C	Decision Analysis – Marketing	A	2.00
D	Decision Analysis – Production	A	2.00
E	Decision Analysis – Finance	A	2.00
F	Strategy Brainstorm Meeting	B, C, D, E	0.50
G	Strategic Consolidation	F	0.50
H	Make Decisions in Capsim	G	0.50
I	Document Strategies/Write-Up	H	2.00
J	Evaluate Results Individually	I	1.00
			7.00

Figure 4 –PERT Analysis of Weekly Capsim Activity Schedule

Project resources vary from situation to situation and IS' particular resource requirements revolve around three items: time, location, and technology. Each team member commits to performing individual analysis responsibilities and then to meet and discuss the findings. Meetings took place on campus, in the library, where access to a wireless Internet system is available. Our technology resources consist of a laptop computer with wireless capabilities to access the Capsim website.

IS's time resource requirement is immense. In addition to individual analysis time, the team must schedule meetings to brainstorm, perform cross-functional analyses, develop specific strategies, and execute them. To accommodate these recurring tasks, IS adheres to a set schedule of successive weekly activities to complete every Capsim round. The IS weekly activity schedule (Figure 4) uses the Program Evaluation and Review Technique (PERT) to organize activities

Step Three: Our third step is critical. Completing Capsim must be done through team accomplishment. Capsim demands a group effort and students cannot successfully accomplish the course learning objectives without working together as a team. Using basic management functions, this step often surrounds concepts of leadership (Schemerhorn, 2003). However, no particular leader is identified within the IS student team.

True, IS utilizes a team to manage Capsim, but we believe also reached a clearer approach to what a team concept entails. Because teamwork poses particular hurdles while conducting the simulation as in business, the team must be ready to address these situations. Apathy, disagreements, and outright arguments are occurrences IS observes in other Capsim student teams. IS avoids these detrimental occurrences because of our third management process step: working together (Figure 5). This particular step allows us to view the team situation differently.

To have team success in any project, each individual group member must accept responsibility for their tasks whether assigned or selected. In the IS case, each member comes from diverse backgrounds, had a wide-range of talents and skills, but shared similar educational experiences. Thus, team members had the ability to rotate tasks each week between team members to increase everyone's learning experience. Tasks are alternated between members. For example, every team member is offered an opportunity to take the lead on evaluating R&D one week, marketing the following week, and then production the next. After leading a sensor operation analysis, a team member is offered a chance to prepare and take the lead on analyzing Capsim financials. In addition, each week's decision documentation is done as a team strategic report that IS uses as a resource in analyzing and formulating future decisions.

Simply put, each team member takes ownership of project areas. In our opinion, this "conquer and divide" philosophy is the best approach to dividing and tasking assignments to the team. Instead of having a designated leader say, "You will do this," we asked ourselves, "What do I like to do and how can I do it best?" This approach allows each of us to ask for and accept responsibility for project areas that interests us. In this way, IS excels at accomplishing of its objectives because the team does enjoy what it is doing. If one team member has a greater interest in marketing than another, he or she can perform the competitive analysis and have marketing suggestions ready for the team strategy meetings. The same can be done if a team member desires to work with production, finance, or research and development. If one member is skilled at organizing, compiling weekly decision data, and is interested in doing so, he or she can perform that task each week.

Although this process may seem broad and very "magical" in some areas, IS believes it represents how projects are completed in a real world environment. Very successful project managers build teams with people they know, who love what they do, accept responsibility for individual areas of expertise, and are able to work together as a team to finish a project.

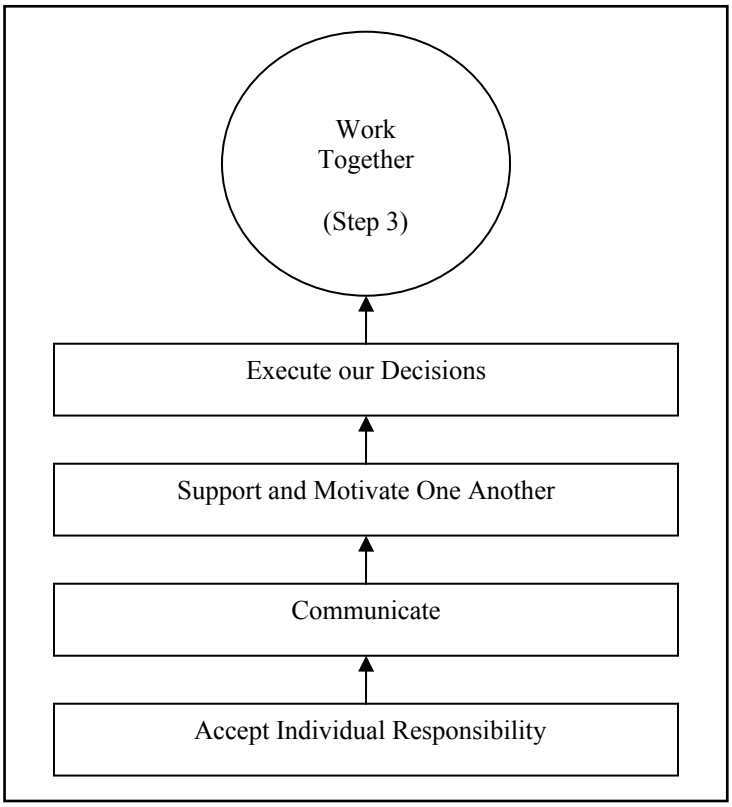


Figure 5 – Work Together

Once team members accept individual responsibility for doing selected jobs, constant communication is maintained regarding progress. Phone, e-mail, fax, and on-the-fly meetings are all commonplace throughout the IS Capsim experience. If one of us has a view on a decision, our expectation is he or she would send an e-mail or make a phone call to share their feelings. Communication is an essential component to teamwork and the number one way to avoid adversarial confrontations in team decisions (Welch, 2005). Laying all the cards on the table and talking through a problem is the primary way we worked through most of our disagreements. In some instances, a team member may become very emotionally involved in specific decision process areas. Often this is seen as an individual's responsibility and ownership for a functional area is allowed in the team. However, no "offense" is taken when people disagree with your position because candor is respected and promoted within the team (Welch, 2005). The team sets personal feelings aside, analyzes the costs and benefits of each decision, and implements decisions as agreed upon. IS would have never developed this level of team synergy if it did not establish effective modes of communication and candor.

With that being said, disagreements did occur within IS. Although the situations never rose to the level of an outright spectacle, IS experienced decisions where it had a hard time coming to an agreement. However, once a decision is discussed and made, it was time to put the issue behind us and move forward with the process that may develop satisfaction from a good decision or a lesson learned from a bad one. No matter the outcome, the team always supports and motivates each another through communication.

As seniors in the COB, there are nights that seem to never end. At many points in the semester, two-hour naps became coveted means of rest and recuperation before the next day. It is understandable that occasionally a team member may be unable to meet an agreed upon deadline. As a team, it is each individual's responsibility to insure the job gets done. If one member had an issue completing a particular task, it was communicated to the others. The team then found a way, through support and motivation, to get that task finished. If one team member was "down" about a low score, a wrong decision, or a bad day, this person had two of the most inspirational cheerleaders on campus at their side. Even as students, we experience life as a series of successes and failures. What differentiates IS from other teams, and gave us a competitive advantage, was our ability to look forward, learn from our mistakes, and pick up one another to try again.

As a group, IS realizes the importance of working together. Throughout every Capsim step, the team accepts responsibility for its tasks, communicates its progress and/or difficulties, and supports and motivates each other. Only when IS accomplishes these steps is it able to execute our decisions and truly call ourselves a team.

Step four: "Be successful" is IS's fourth element in the project management process that culminates all our efforts to this point in time (Figure 6). Levels of success can be a

subjective determination. However, IS believes "being successful" is a natural result of accepting the challenge before us, focusing on the learning process, and working together as a team. To be successful in the Capsim, IS constantly re-evaluates itself. Strategy formulation and analysis, the major thrust of the course and Capsim, is embodied the process's fourth stage. To achieve success, IS documents its strategies, analyzes the results, and then brainstorms and reformulates strategies for future decision rounds. This stage serves to bring conclusion to each round of decisions and to prepare us for each future round.

IS views documentation as an essential function for simulation success. Because Capsim requires many, various, and complex decisions to be made each week, IS places a high value on documenting team thought processes throughout this experience. IS wants to not only understand what decisions are being made, but how and why. To be able to effectively analyze previous decisions demands complete documentation of previous rounds. In order to build effective strategies, IS must understand where it has been and where it plans to go. Documenting IS strategies in a weekly write-up for each product line and decision area are invaluable to be successful. Due to the cross-functional nature of our team's individual activities, it is vital to document the feelings, thought processes, and states of mind of each member.

Equally important is the team's weekly analysis of Capsim results. As discussed previously, each team member takes ownership and responsibility for some project area. Using developed IS strategic summaries, a member analyzes the prior round results and develops talking points for the team's review during our weekly result evaluation meeting each Monday. This meeting is where the team asks itself tough result-oriented questions and focuses our efforts on answering the how's, why's, and what ifs of each decision. Team brainstorming is so important in all team activities when performing the weekly analysis activities, our competitive analysis meetings, strategic consolidation meetings, through our decision sessions. There is not a question or comment that cannot be posed by any member, in any meeting, and at any time which is the hallmark of true brainstorming (Schemerhorn, 2003). By achieving a level of comfort during strategic analysis and brainstorming, IS prepares to reformulate basic and specific strategies of Capsim. This stage, as other steps in the IS process, is a mental state achieved both individually and as a team. Once this is accomplished, IS is in a place geared for success.

When IS completed steps one and two in our management process, the team rarely focused on them again. IS views the acceptance of the Capsim challenge and focusing on the learning process as two steps that the team does not have to constantly revisit to accomplish its goals. This is because team members commit themselves to IS' success early in the semester. However, as each Capsim round progresses, IS consistently finds itself recycling through steps (3) Work Together and (4) Be Successful. With the rotation of each team member's weekly responsibilities, and the reiterative nature of documenting strategy, results analysis, and reformulation, IS continues to finding itself back at either stage three or four.

When looking at basic management functions, the leading and controlling functions are also constantly repeated as a project moves forward. As one evaluates the IS project management process in Capsim, it shares remarkable similarity to the basic concepts of project management (Heizer & Render, 2004). What is seen, through Capsim and the efforts of IS, is the attainment of one of the major goals of higher education: bridging the gap between the classroom and the boardroom.

Conclusion from the Student Perspective. Project management is all about people, ordinary people, getting things done. Can it be complex? Absolutely because rarely is a project, big or small, without a measure of complexity. Do people approach projects using basic concepts and planning every activity based on textbook definitions of the management process? Some teams do, but we know others, like IS, do not in order to reach top levels of performance.

Throughout the Capsim experience, the IS goal is to start understanding the great separation between the real world and the controlled academic environment of our classrooms. IS wants to help close this divide and understand how we are able to apply the things we have learned through trial and error to practical applications of our business knowledge. These results come directly from experiencing the Capsim business simulation.

IS accepts the challenge of putting our education to the test in a real-world business simulation. Our team focuses on a learning process that integrates a cross-functional knowledge into a singular strategic system for a sensor industry. IS works together as a team by using individual responsibility, communication, and precise execution in decisions. No matter what happens, IS considers itself a success.

The team believes there is no other venue to test developing student skills than performing in a real-world environment like Capsim. The team has truly enjoyed the experience learning volumes of knowledge about business, strategy, and above all, about us. Teamwork is vital in any area, industry, discipline, or career. Everyday teamwork surrounds us as we execute the concepts of project management. Project managers are everywhere being parents, grandparents, teachers, scientists, engineers, and even students. We too are project managers as executives of the Integrated Solutions Sensor Corporation and in this capacity, we truly learned what it means to learn.

PROJECT MANAGEMENT: A FACULTY VIEW

Project management skills are critical to a successful simulation's completion but currently there currently is no specific faculty assessment measure to evaluate student efforts. The construction of a simulation's project management rubric is directly applicable to modifying the

overall COB curriculum in order to improve a student's project management skills. In addition, using a simulation as an experiential learning exercise directly supports the University QEP goal of active learning and student engagement. When using the simulation, students are intimately involved with project management from beginning to end. When using a project management evaluation rubric, the relationship of project management skills to actually managing an intense learning experience reinforces the value of these previously learned skills.

A project management rubric. Anticipated program management student learning objectives are achieved during the administration of Capsim. The simulation's complexity requires teams to go through a division-of–labor process and assign specific tasks to individual members. Failure to identify all relevant tasks will adversely affect performance. As the simulation progresses, the ability of a team to recognize unassigned tasks and reassign those tasks is a critical performance event to have happen. The simulation requires both individual and group work so group meetings must be scheduled such that time is allowed for completing individual assignments before having group meetings. The completion of a weekly decision require group members combine individual preferences and goals into a team decision. Typically team members can become set on personal goals and/or agendas for their products or discipline-related assignment and this requires negotiation and compromise to settle these issues on a team level. The weekly decision requires students to come to closure on a complex decision by a specific time. This requires a myriad of decisions about multiple products in multiple competing segments that require compromise between product managers as well as between Marketing, Production, R&D, and Finance managers. Lastly, there are two major deliverables from this effort. The aforementioned weekly decisions, and a to-be-developed series of written reports to assess student success at situational analysis, issue identification, and strategy development. All of the above are activities involving the application of program management skills.

By developing a rubric, the assessment of project management skills can be made by evaluating three areas: input, process, and output. The input area, assessed by the instructor, focuses on Capsim operations planning which involves team members signing up to a team-developed work contracts, identifying and scheduling Capsim work activities, and using appropriate strategic management models to analyze the Capsim environments. Group processes, assessed by student team members, look at the scheduling and controlling activities performed by team members. Attendance, preparation, and participation of each team member is evaluated by each member and provided to the instructor as part of this rubric. Lastly, output is assessed by evaluating the delivery stream of decisions and strategy products and the professional write-up and content seen in both (Figure 7).

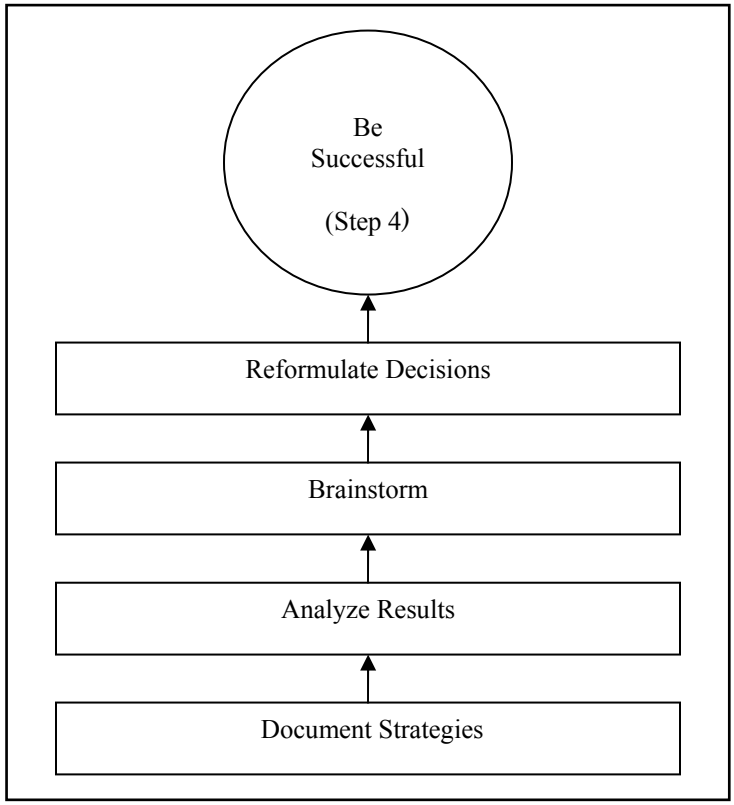


Figure 6 – Be Successful

PROJECT MANAGEMENT: WHAT THE PERSPECTIVES OFFER

A large difference between student and faculty views is about what project management entails and this comes from a lack of an ability to measure the project management skills being applied. The students discuss commitment, motivation, accepting responsibility, and communication very generally as key components in successful Capsim teams. This is not saying these variables are not important. However, they fail to identify how the team can measure these variables to assess performance. Any team needs to define and quantify what it professes as being the key variables of program management so these areas can be measured and assessed. Without the specific measures, team members will be unsure what they need to do to be successful.

The proposed rubric attempts to assign numbers to the major project management areas of input, process and output points. Using instructor assessments of input and output points and the team's assessment of its processes, project management skills are evaluated. This rubric is being used in a pilot study this fall semester to judge its ability to capture meaningful skill information. The results of this study will be out in Spring 2006.

Our students offer their perspectives and practices on project management believing their efforts identify "best practices" that are powerful tools for promoting operating excellence and better strategy execution. For a best practice to be valuable and transferable, it must demonstrate success over time, deliver quantifiable and highly positive results, and be repeatable (Thompson, Gamble, & Strickland, 2004). This described student approach has IS team being successful and rated as the number two team in the class with 3 more decision periods to go. Whether this approach is repeatable by other teams, will depend on if their program management activities can be more clearly defined, measured, and articulated to others. This way the actual activities that the IS pursues will be actually known and used by other teams.

CLOSING THOUGHTS

Looking at a student and faculty view of project management highlights the both similarities and differences between the two groups. Students relish the student networking in team activity while growing their project management skills to successfully pass a course. Faculty need to be able to see if program management skills used in the course match outside business needs. Blending the two together can only come from seeing clear definitions of needed program management activities.

The simulation is an embedded experiential learning exercise covering the strategic management theories and frameworks students should use in making strategic decisions and preparing business reports. Thus the simulation offers the student an ability to apply in a realistic competitive environment the discipline specific skills and knowledge acquired from our COB curriculum. This curriculum has state-directed student learning objectives for students to demonstrate learned skills in program management. The use of simulations as a pedagogical tool has been supported in a variety of empirical research efforts (Gentry, 1990) and is used effectively in this strategic management course demonstrating developing program management skills. Active learning and student engagement is seen comes directly from the competitive environment experienced within this team versus team competition.

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Pilot Study: Fall 2005

Assessment of Project Management Skills in the Capstone Course

(How students manage the simulation project)

Name of Student:_____

Input Points:	0 – 1	2 – 3	4 – 5	
Project Planning	Fails to meet expectation	Meets Expectation	Exceeds Expectation	25 Points
Appropriate team contract written & signed				/5
Decision work breakdown structure & timeline				/10
Using acceptable models (M&O, Strategy, I&CA)				/10

Instructor Input

Process Points:	0 – 1	2 – 3	4 – 5	
Project Process (Scheduling/Controlling)	Fails to meet expectation	Meets Expectation	Exceeds Expectation	25 Points
Attends group meetings				/5
Arrives on time for group meetings				/5
Arrives prepared for group meetings				/5
Participates in group meeting discussions				/5
Works effectively as a group member				/5

Individual Student Input

Output Points:	0 – 1	2 – 3	4 – 5	
Project Delivery (Controlling)	Fails to meet expectation	Meets Expectation	Exceeds Expectation	50 Points
Delivers complete project decisions on time				/10
Delivers complete project write-ups on time				/10
Effective well-written professional decisions				/15
Effective & professionally written strategy write-ups				/15

Instructor Input

Final Rating (Circle the rating based on total points)

Points range	Rating
90 -100	Exemplary
73 – 89	Acceptable
less than 73	Unacceptable

Figure 7- Project Management Rubric