

**THE REAL-TIME CASE METHOD: DESCRIPTION AND ANALYSIS OF THE
FIRST IMPLEMENTATION**

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ABSTRACT

This paper describes the first implementation of the "Real-time Case Method" (RTCM)-- a new instructional practice that makes use of various technologies to create a new type of case study.

Data obtained from five instructors at four business schools in the US and Canada were analyzed using analytic induction. Analysis suggests RTCM was able to be successfully implemented at both graduate and undergraduate levels, in traditional face-to-face as well as online learning environments, with students of varying levels of experience and backgrounds, and by instructors with differing professional backgrounds and teaching styles. The instructors were highly satisfied with the method. They observed that students were engaged by RTC, that it motivated them to work harder and longer on assignments, and that it allowed them to have experiences that were qualitatively different from those available from textbooks and traditional cases.

About the Real-time Case Method (RTCM)

The Real-time Case Method or RTCM is a new instructional model for business education. This model presumes the efficacy of the traditional case method and builds upon this foundation to create a qualitatively unique instructional model fashioned around the use of a "real-time" case or RTC. Real-time cases represent a departure from traditional cases through two important characteristics: 1) real-time interactivity and 2) extended coverage.

The first characteristic of a real-time case is real-time interactivity. Through real-time interactivity, students communicate with the case company by asking questions and making recommendations as important business decisions are made. Real-time interactivity is possible because the case study unfolds at a time and pace concurrent with students' analysis of it. Materials related to the case are posted on the Web weekly by a case writer who is "on location" at the company. Unlike traditional cases in which all case materials communicate events that happened at least a year earlier, the materials available to students analyzing a RTC are current. They represent the most up-to-date information available about the company. Students analyzing a real-time case have access to the same information as those working in the case company with the exception of confidential materials. The real time coverage makes it possible for students to experience real-time interactivity with the employees at the case company--a feature that distinguishes RTCM from the traditional case method.

In RTCM, some interactions between the case company and students are *direct*, consisting of videoconferences with case company employees, email exchanges with key

players in the company, and regularly scheduled online chats with company managers. Other interactions are *mediated* by the case writer to allow student interaction without putting undue strain on the case company.

The second distinguishing characteristic of RTCM is extended coverage. Traditional cases usually present a snapshot of a single case company at a particular point and time in its development. In contrast, real-time cases describe events that occur in a case company over an extended period of time (i.e. the duration of a typical 14-week semester or longer). The purpose of studying a case over a longer time period is to facilitate students' development of a deeper understanding of the people and characteristics of a single company. The resulting real-time case is book-length, compared to the 5-20 pages of a traditional case. This greater amount of coverage allows students to see the complex, interdisciplinary nature of business decision-making.

Description of the First RTCM Implementation

In fall 2001, faculty members at four institutions (including the University of Massachusetts, University of New Brunswick, Florida Atlantic University, and Worcester Polytechnic Institute) implemented RTCM for the first time. The real-time case focused on Optasite Inc., a company in the business of maintaining and optimizing the performance of cell phone systems. Optasite's ambitious goal at the time was to be the first company to offer nationwide service to cell phone carriers. During the real-time case coverage there was intense activity at the company, for example the search for second round venture capital, the demotion of the founder by the Board, and a rethinking of the business model.

An experienced New York Times reporter was hired as the case writer. The writer was given a desk in the company's headquarters in Worcester, Massachusetts during the 14-week semester. Each week, the case writer posted weekly case installments or "caselets" describing issues faced by the company on the RTC website. Each caselet posed the "problem of the week". For example, one week the problem was, "how do we define our product?" The next week it was, "how should we price our product?" Additional materials, such as the company's business plan, related articles about the telecommunications industry, video interviews, and company documents, were posted by the RTC director and his graduate assistants on the RTC website. User access to this website was restricted to the development team, faculty, and students enrolled in the course to keep materials on the site secure and confidential.

Each week students at the four business schools in six different sections (3 sections at the University of Massachusetts and 1 section at all other campuses) read and analyzed the case installments. The course instructors were given the freedom to use materials at their own discretion based on the content of their courses, format of their instruction, and needs of their students. Various approaches were used in implementation.

During the semester, students had the opportunity to interact with the case company in a variety of ways. Emails with the various employees at the case company were exchanged and several videoconferences were held. One conference allowed students to meet the case company founder and CEO. During this interaction, students learned more about this person's character and asked questions about the company and its

challenges. One group of students had an additional meeting with the company CEO and the case writer at their campus.

During the middle of the semester, students had the opportunity to compete against one another to analyze a caselet. Teams of students submitted their analyses for review by their own instructors. Then, each instructor selected the best analysis and forwarded it to the company. Finally, the company selected one winning team. The winning team received a free trip to a cell phone industry trade show where they met the case company leaders in person and interviewed the company's competitors, suppliers, and prospective customers. The team gathered vital information about the industry that had eluded the case company.

Determining the viability of RTCM as a new instructional practice

For RTCM to stand the test as a new instructional practice worthy of widespread adoption, one must determine its effectiveness for both students and instructors. In the remaining sections we attempt to do this.

Quantitative data taken from student course evaluations reported elsewhere indicated that students taking part in the first implementation of RTCM perceived it was able to provide them learning experiences that were engaging, relevant, and enjoyable. Later in this paper, we share in-depth perceptions from faculty about the effectiveness of the method. But next we provide details about RTCM that suggest its success as an instructional method is due in part to the fact that it is flexible enough to allow variation in its implementation across different sites, by different instructors, with different students, and yet provides enough consistency in content and use to ensure some basic quality.

Characteristics of Site Implementation

- § Feedback solicited from instructors through a written questionnaire and informal interview at the completion of the RTC implementation revealed the following points.
- § RTCM was used to teach entrepreneurship in four different institutions in the US and Canada that varied in student populations, academic schedules, and proximity to business centers.
- § RTCM was used in a variety of course formats--including both large and small face-to-face meetings, and a distributed distance learning course via the Web using IP telephony .
- § The instructor(s) in each location possessed unique backgrounds, experiences, and qualifications that influenced their instructional approaches.
- § The student populations at each location varied in several different ways but all found the method and the case interesting and engaging.

Although there were similarities at the sites, the differences between sites are equally important. Here we explain more about these.

[Insert Table #1 Approximately Here]

Site #1: Florida Atlantic University- At this site, RTCM was implemented in a seminar course for undergraduates in business over a typical semester. This student population was comprised of eight male students in their early to mid-twenties, most of whom were

carrying a full academic load and worked full or part-time. The course instructor was a self-taught businessman, experienced entrepreneur, and held an Ed.D. During the course this instructor utilized various approaches to engage students in the learning process. He often used role playing and Socratic questioning. He encouraged students to apply what they had learned in course readings through the completion of organizational charts and spreadsheets. In addition to the materials provided with RTC, curriculum material was drawn from a textbook on personal leadership development.

Site #2: University of New Brunswick- At this site, RTCM was used in a course on business planning and strategy. The course was part of a larger diploma program on Technology Management and Entrepreneurship (TME)¹. The students included 14 working professionals, 3 undergraduates, and 3 graduates in different locations around the globe. Although students all had backgrounds in technology, they had only basic business skills. Students interacted with one another during synchronous class sessions via IP telephony with the help of a web-based tool called Centra. They also engaged in asynchronous web-based instruction. The course was co-taught by two professors. One had substantial experience in teaching business courses and specialized in entrepreneurship education. He also had extensive experience as a management consultant. The other had a degree in law, experience in investment banking, and knowledge from starting a consulting company. One instructional approach they used with RTC was to involve three students each week in presenting an overview and analysis of the case issues in the weekly case installment. The students' 20 minute presentation was intended to provide the entire class with background information useful

for analyzing the caselet, and it raised issues for the subsequent class discussion that followed via video.

Site #3: University of Massachusetts Amherst- At this site three groups of students experienced RTCM in three different courses. The first group of students consisted of 40 undergraduates who met face-to-face once a week for three hours. The second group consisted of 12 students in the on campus MBA program who also met once each week. The third group of students included 13 working professionals participating in the off-campus MBA program. This group of students experienced the course as a totally asynchronous online offering using the World Wide Web. The instructor at UMass was also the RTC director, whose job it was to guide the case writer in the development of the weekly case material. This individual had over ten years of business teaching experience in entrepreneurship education, and experience as an entrepreneur. In addition, he had a doctorate in education and an MBA from Harvard, where he became committed to the case method. Instructional methods characterizing this instructor's implementation included "classic case teaching": Socratic questioning, polling, sparking controversy and setting up debates among students, tracking the discussion on the blackboard, challenging students, clarifying, encouraging, seeking consensus toward the end. The instructor at this site invited to class guest speakers from the industry to share their insights on the case.

Site #4: Worcester Polytechnic Institute- Here RTCM was a critical component of a course on entrepreneurship taught in two seven-week terms. The members of the two classes varied somewhat due to the term system, and some students joined the class

halfway through the RTC. The students participating were mostly undergraduate students in their mid-20s pursuing degrees including Management Information systems and IT, Computer Science, Electrical, Mechanical and Civil Engineering. Some students worked part-time or managed business on the side. The course instructor had background in chemistry and life sciences as well as experience in marketing, training, and as an entrepreneur. He also had a business degree from the UK. At WPI, RTC occupied about one hour of each two-hour session. Individual students shared written summaries they had produced based on the weekly case installment, and one student would be asked to lead the class discussion.

All instructors implementing the real-time case method favored interactive teaching, thinking on their feet, intellectual challenges, risk-taking, and valued learning they had gained from their personal experiences. The instructional techniques they used with RTC varied to some degree, but goals for each of the courses were similar. All instructors agreed that their goals for using RTC included: 1) fostering students' ability to analyze real-world problems, 2) providing students opportunities to practice making decisions, 3) helping students understand the realities of business, and 4) encouraging students to apply theory for the purpose of better understanding real-world business problems.

Purpose and Method

For RTCM to become widely adopted, it must be effective with students in a variety of educational settings, and it must also be championed by instructors. For

instructors to accept RTCM, they must deem the method useful in achieving their instructional goals, and must find it enjoyable to teach.

Analytic induction (Znaniecki, 1934), was used as the approach for analyzing the qualitative data in this study. Qualitative data was obtained through a questionnaire and through interviews with the five RTCM instructors. Analysis of the instructors' satisfaction levels with RTCM began by generating assertions about the factors that might influence their satisfaction.

To generate assertions, the project evaluator first considered the expectations instructors had for their use of RTCM. These expectations were recorded on behalf of the group by the RTC designer in writing prior to RTCM implementation. Then analytic induction was used to generate a series of empirical assertions about the implementation of RTCM and the factors influencing instructors' satisfaction with it. These assertions were then used during instructor interviews. During each interview, the project evaluator asked probing questions in an effort to accept and refine these assertions or reject them if they were irrelevant. As analysis proceeded, all of the assertions were verified and refined--becoming research findings. A report was crafted to share this information and then circulated among the instructors to enhance reliability and validity.

Instructor satisfaction and factors of influence

In this section we present the initial assertions generated by the project evaluator after examining instructors' expectations for their implementation of RTCM. Then we share an explanation of the revision process that each assertion underwent following the qualitative interviewing process. The research finding that resulted after assertions were

refined is presented. Each finding was generated through the revision of the initial assertions during the interview process.

§ *Assertion #1: The instructors would consider RTCM an effective instructional tool.*

All data obtained from the course instructors supported the assertion that RTCM was an effective instructional tool. When asked to explain their evidence for the effectiveness of the method each instructor indicated that this determination resulted from a personal judgment based on past experience rather than data derived from some empirical measure². One representative comment illustrates this, "As an experienced educator, you can sense when things are working well for students and when they are not."

Although each instructor supported the assertion, it must be noted that the instructors suggested multiple notions of what effective tools should do and how they should function. Accordingly, this assertion was refined to become the following:

§ *Finding #1: The instructors considered RTCM an effective instructional tool for: 1) increasing student motivation, 2) building student-self confidence, and 3) expanding students' level of knowledge and skill.*

Interviews with RTCM instructors revealed that RTCM helped to motivate student learning. This motivation was viewed by all as an important part of the learning process. One instructor found that RTCM provided a special kind of motivation. As he

² We recognize that measuring the RTCM's effectiveness with instructors' perceptions and "gut instincts" presents some obvious empirical problems. Soon to be published will be quantitative and qualitative measures of student satisfaction and learning. However, until then we feel there is value reporting the insights of experienced educators and taking them seriously when they comment as this one did saying, "I don't have any hard quantitative data that the thing was effective but my gut feeling was that hey, this is working, and the students are learning from it."

commented, "What the RTC provides is authentic motivation." The real-time aspect of the case was noted as the primary interest-generating mechanism. One instructor explained it as, "the "value-added," suggesting that it was derived from "the realism, dynamism and currency of the learning material."

The in-depth coverage of the RTC was another factor responsible for student motivation. As another instructor explained, this in-depth coverage made students more interested because "they kept wanting to know what the answer was going to be, including the human dynamics within the company".

Instructors also found RTCM an effective tool for building student confidence. As one instructor explained, "I think RTC allows the students to gain confidence from being partnered with the professor rather than being put in the traditional student-teacher role." Another faculty member also mentioned this feeling of partnership with students saying, "the RTC made us much more collaborative. The students and I rolled up our sleeves and tried to figure out the case together."

Instructors also indicated that RTC was an effective tool for promoting skills and knowledge required for success in business careers. One instructor suggested that RTC helped students to better understand real-world business because they experienced problems in real-time, and learned about "a real company with real problems, with CEOs being fired, running out of money, and sales not developing the way the company thought they would." In large part, they learned about these things because the action in the case happened before these mistakes could be edited out as is so often the way with more traditional cases.

Instructors also indicated that students had learned to use web-resources when interacting with the RTC, as they would in a real job.. As he explained, "They would go on the web . . . they'd try to find competitors...there were no right answers but they were digging in a controlled way and in a directed way so they could apply the experience into the real world." Another instructor pointed out that experiencing the case gave students background for future learning. He observed what happened after the RTCM experience saying, "as we discuss business concepts we now have a wealth of examples from Optasite to draw upon to put the concept in perspective for the student. Since the students had direct experience with the Optasite cases, the examples were much more meaningful for them."

Assertion #2: All instructors would enjoy using RTCM.

The instructors involved in the first implementation of RTCM were unanimous in finding their experience enjoyable. The instructors indicated a variety of reasons for this enjoyment and each instructor enjoyed the experience for multiple reasons.

§ *Finding #2: All instructors enjoyed using RTCM because it was exciting, challenging, and made teaching more active.*

All of the instructors indicated at least some of their enjoyment emanated from the heightened sense of personal engagement and excitement they felt during the act of teaching when using the RTC. They found the teaching with RTCM engaging or "thrilling" due to the many unexpected occurrences they experienced during the semester. One comment illustrating this notion is, "I really dread going back to teaching my

entrepreneurship course in the traditional way. The traditional way is like a moving sidewalk (as you would find at an airport); the real-time case is like an amusement park's scariest roller coaster: exhilarating!"

Several instructors suggested that the challenge associated with teaching RTCM was a source of enjoyment. This sense of challenge appeared to be due to a number of factors including: 1) the intellectually demanding work of guiding students through the analysis of a constantly evolving scenario, 2) working with sometimes incomplete information that had to be supplemented with information from other sources, 3) solving problems for which there was no one "right answer", and 4) working with a case company in an industry affected dramatically by world events of 9/11.

Instructors also indicated that teaching was enjoyable because it was active. One instructor likened the experience to those he had as an entrepreneur saying, "Using RTCM keeps me close to my roots of experiencing entrepreneurship first hand—strategies, tactics, actions, hopes, heartaches." Another instructor explained the active nature of teaching with the RTC saying, "sometimes 'breaking news' changed the agenda so that you just had to be in a "pass-action play." Every minute you're deciding where to throw the ball. I like working in situations like that."

§ *Assertion #3: The instructors using RTCM would perform different roles than instructors using more traditional teaching methods.*

This expectation was fully realized by all the instructors involved in the first implementation of RTCM. All found the experience rewarding but acknowledged that activities associated with its implementation caused them to deviate from their normal

roles as instructor. As they explained the ways the RTCM instructor role departed from traditional instructor roles, and suggested that special skills and talents were required by RTCM, the assertion was revised to become this finding:

§ *Finding #3: The instructors using RTCM performed different roles than instructors using more traditional teaching methods and these roles required different skills and experiences, and more time for preparation.*

When using traditional teaching methods, instructors determine course content, the sequencing of this content, and control the speed with which this content will be covered. In contrast, RTCM instructors departed from this traditional instructional role and their teaching became more reactive. Instead of deciding in advance upon all content material that would be covered, RTCM instructors responded to the content material that was generated by the twists and turns of the constantly evolving RTC. As one instructor explained, "[I]n regular courses my teaching involves explaining concepts and then trying to provide “real world” examples relevant to the concept. With the RTC you get the example first and then you decide what concepts you want to teach".

Although instructors could determine some of the concepts that would be covered in advance, most content for class discussion was gleaned from the case as it became relevant and learning became "just-in-time". This change in role was surprising for students as one instructor explained, “I was supposed to be able to come to class and deliver this perfect package of pedagogical solutions to a problem. What I did was come to class with three or four ideas that could impact the particular issue we were discussing”. Students found it impressive when RTCM instructors modeled "thinking on

their feet." "Students thought it was neat that I didn't just tell them I had once solved problems in a business--I showed them."

Comments about the specific types of instructor roles called for by RTCM were synthesized and summarized. They suggest that instructors performed several specific roles. First, instructors became partners with students. In this context, an important part of the instructor's role was to bring personal experiences into the classroom that had bearing on case situations.

Another instructor role was that of an organizer who could help students make sense of complex and sometimes conflicting information. Instructor comments echoed this idea that teaching with RTCM demanded more of their talents and expertise and experience. The idea is illustrated in this comment, "[W]e drew the business experience of myself and my co-instructor to reinforce issues and concepts that arose during the discussions. I know that the students found this a valuable component. They often asked us what our opinions were of issues".

Another predominant instructor role was that of facilitator or coach as this comment suggests, "I found myself increasingly in the role of trying to coach students to understand that any consultant requires a lot of patience with the process and people because there are disappointments and changes on the fly".

Instructors also agreed that the skills of instructors were stretched beyond what is normally required in teaching. Skills identified by the instructors as being helpful with this aspect of RTCM teaching were problem-solving, quick-thinking, dynamic analysis, and discussion facilitation. One instructor described his duties saying, "there was a need to create specific themes and structure in exploring the updates and other material

provided plus facilitate discussion around a central theme. This was not always easy given the detail of the material available and the structure of the academic program.

It must be noted that all the instructors interviewed indicated that the time commitment involved in preparing for classes using RTCM exceeded the amount of time required for other types of teaching. However, they generally found the time spent preparing enjoyable and worthwhile.

Assertion #4: Students would be engaged in RTCM.

To learn from RTCM, instructors believed that students needed to be intrigued with the case. The instructors also believed that this sense of engagement would come at least in part from the real-life drama of the case. This expectation was realized at all the locations where the RTC was used initially but waned at two sites during the semester as will be explained later on.

One instructor described student engagement saying, "I experienced a tremendous emotional potential and intellectual curiosity with students which I believe can be directly associated with the real-time case study." In some cases, students were willing to work harder and longer as one instructor explained, "[T]here was enthusiasm in spite of the expected increase in work, differences in traditional pedagogical structure (e.g., downloading company reports from the web on a given deadline date for the following week's study, e-mailing class and individual responses with close deadlines, the need to attend video-broadcast outside of class schedule), and the uncertainty of the source or flow of much of their resources for study". The cause of this increased interest was not

just the real-life drama of the case. In part, it was due to the belief that they might actually influence the case company.

Finding #4: Students were engaged in RTCM but their levels of engagement were influenced by the: 1) number, quality, and expectations for interaction with the case company, 2) factors related to the site-based implementation, and 3) individual and composite skills and knowledge.

As the finding suggests, several factors influenced the level of students' engagement as observed by their instructors over the course of the semester. Students' engagement levels appeared to wane at two of the four sites over the course of the semester, while at the remaining two sites it increased. Exploration of this phenomenon with the instructors at these locations revealed that several factors were influential.

The number, quality, and expectations for interactions students had with the company influenced students' degree of engagement. At one site, an instructor had encouraged his students to consider their interaction through submission of recommendations as integral in the company's decision-making process. He suggested that "the fate of the company rested upon them". Failure of RTCM to meet their expectation for this interactivity affected their interest. Students were disappointed that they did not have more involvement in the decision making at the company. Lack of complete or adequate information added to this frustration because students were trying to provide assistance to the company without being given complete information. (Even though the company itself lacked the information students wanted.) Their instructor described this saying, "positive stimulation began to wane in the face of what appears as

confusing, incomplete, and, at times, contradictory information from the company out of which they are to be held accountable for responsible consultative advice. Their passion for saving the company began turning into a frustration in knowing what's really going on." Some students became less interested in the experience because they lost faith in the company's management..."they lost the emotional bond...and even felt that certain among the company's executives might be withholding key information. The instructor at this site felt partially to blame for this, suggesting that he had, "over sold" the course. "I set the expectations so high...I said this company's success or failure is on your shoulders".

For students at the UMASS site and students at other sites involved, a critical interaction with the case company increased their level of engagement. What happened was the group of students who won the mid-semester case analysis contest attended the trade show with the case company. During this experience, the winning team of UMASS students uncovered that the company had underestimated its competition. As one instructor explained, "they uncovered a horrendous gap in their thinking, planning, and general strategy". Students took advantage of the trade show resources to scout the case company's competition. After collecting this information, they put together a presentation that revealed the company's oversight of their competition and briefed them on essential information about their industry. The students who experienced this interaction first-hand and their classmates at different RTC sites who learned vicariously learned some important lessons about the company in particular and entrepreneurship in general. As an instructor described, "It was the key turning point for many students...it showed them the realities of business".

Institutional constraints and scheduling were also responsible for influencing student interest. At one site, the shortened academic term (two seven-week sessions) presented a problem for attaining and maintaining student interest. The pace of change in the case company did not progress as rapidly as students had anticipated. The site instructor explained this saying, "expectations had been built up for the students early on that this would be slightly faster paced and a little bit more dynamic in terms of seeing what was going on in the company."

The knowledge and skills of students at each location also influenced their engagement. At two sites, students' enthusiasm about the RTC continued at a high level until the end of the semester and beyond. "I would say that the interest increased as the case went along rather than waned," said one site instructor. And at one location where the RTC students continue to meet in a cohort group with their RTC instructors after the case completed, their instructor notes, "[T]hey are still asking for updates on Optasite". In this situation, students happened to be familiar with the case company's industry, which positively influenced engagement. As the instructor suggested, "the student group included many who were very knowledgeable about the cellular telephone industry and this made them more interested in the continuation of the case."

§ *Assertion #5: RTCM would offer students an experience qualitatively different from those available with textbooks and traditional cases.*

When asked to explore this assertion, instructors shared many experiences that indicated that learning provided by the RTC was indeed an experience distinct from that of using textbooks and other traditional types of cases.

§ *Finding #5: RTCM offered students an experience qualitatively different from those available from textbooks and traditional cases because the RTC taught students about the realities of business through an in-depth study of one company throughout an entire semester.*

One distinct characteristic was that the "right answer" to problems that the company faced were not always evident or identifiable. As one instructor described it, "in traditional courses the professor is standing up there with all of the knowledge and peeling it off leaf by leaf to the students as though there are right and wrong answers." He further suggested the utility of this saying, "The real world isn't like that. And that's a fantastic advantage of the real-time case study. No one knows the answer, not even the professor."

Two instructors alluded to a distinctive characteristic of the RTC when compared with other, more traditional cases. This difference was that the RTC revealed more mistakes made by the company and demonstrated more negative examples than are typical in traditional cases. Because the RTC unfolded gradually while the students were watching, many mistakes or negative examples were not extracted before students could see them. In most instances, these mistakes were not identifiable until later. One instructor described the importance of learning from negative examples saying that, "[T]oo often, we're really banging on about success and what we don't do is spend enough time looking at failure: reasons behind it and ways we can learn from that". Instructors believed that students' learning was expanded by these mistakes and that their confidence in being able to go into business was expanded when they recognized that even the

professionals don't always "do everything right." However, it must be noted that this had an effect on students' enthusiasm and connection to the company as one instructor explains, "They came to class very sober faced and very enthusiastic and progressively as each week went by and some of their questions began to target the management's lack of completeness on some of their strategies; the students became frustrated and confused".

Other instructors commented that the RTC was different than learning from a textbook because the lessons were not as organized or structured. One explained this saying, "it certainly was much less planned and organized in comparison to my other courses. . ." Another elaborated on the feeling that students' felt, "All of a sudden, we're jumping into the world of business trying to 'shadow manage' a high-tech business start-up and we have no knowledge of business." Instructors expected this lack of structure to be a problem. It seems however that most relied on their own talent, skill and experience, to address this concern. Each faculty member had approaches for trying to "order what seemed to be chaos." Some developed and imposed "themes and structure" on each week's material--drawing from literature and associated readings to provide students appropriate content knowledge. Another referred to the lack of structure as an "uncontrollable learning agenda" that was "driven by what was happening in the company." This instructor and his colleagues were able to accommodate this demand of the RTC by figuring out what was "coming up in the context of the case of the week or the discussion we were having...then provide them [students] observations based on our own practical experience. He commented, "I really think that helped the learning."

The most important of many business realities that students learned during the experience was that leaders in businesses and companies often make mistakes. This

lesson was learned when students from one of the RTC sites discovered that Optasite had underestimated its competition. The visit to the trade show left students wondering, as their instructor shared, "How can these guys be in business for a year and a half and not have developed their product in view of the competitive situation?". One instructor commented on the significance of this lesson saying, "I think that was a kind of a real world slap in the face for some of the students. They were like "Aw, wow! That's not like the books, that's not like this". Students also learned that they were incorrect in their assumption that, "if you're in business and your business exists, then everything or most everything is right." Students learned that simply getting capital investments and having good leadership are not guarantees that a company will succeed. Among other lessons gained by students were that 1) organizations are influenced dramatically by the character of their leaders, 2) starting a company is really hard work that often makes people compromise their personal lives, 3) businesses often say they are going to do one thing in a business plan and do something else in practice, and 4) second-round funds can often be granted even when company leadership has failed to prove itself.

Summary

It is impossible to truly determine the efficacy of any instructional method used for preparing business professionals without investigating their work once they have left the classroom. Until it is possible to follow business graduates in a longitudinal study throughout their business careers and measure how their education has influenced their ability to make quick, effective business decisions, those interested in improving business education will have to be content with studies that attempt to determine how well

methods work by measuring student learning before and after the experience and studies that investigate instructors and students perceptions of how well these methods work.

In this study, we reported on the implementation of a new instructional practice that brings the real world of business closer to the educational experience of students in graduate and undergraduate programs. We attempted to explain how this practice, the Real-time Case Method, fared in its first implementation during fall 2001. Specifically we examined the implementation of this method across four educational sites. We reported the findings of a study that revealed that the instructors using RTCM were highly satisfied with it. They found it was able to help them achieve their instructional goals-- to motivate students, build their confidence, and promote their acquisition of business skills and knowledge. In addition, instructors found their experiences using RTCM enjoyable. They discovered that RTCM challenged them to act in new instructional roles including partner (with students), organizer, coach, and consultant. An additional source of instructor satisfaction came from their perception of RTCM's effect on their students. Instructors observed that students were highly engaged by the RTC, that it motivated them to work harder and longer on assignments, and that it allowed them to have experiences that were qualitatively different from those available from textbooks and traditional cases.

These findings, though based on instructors' perceptions and purely qualitative data, are strong enough to support future implementations of this method and future study of its effect on teaching and learning. We hope that future implementations of the method will enable us to study the short- and long-term effects on student knowledge and skills when compared over time and against other instructional models.

Table 1

Institution	Student Profile	Instructor Profile	Course duration and description	Instructional Techniques
Florida Atlantic University	8 male students, early to mid-twenties, undergraduate, full-time, both full- and part-time employees majoring in business	Self-taught entrepreneur, graduate degrees in educational administration and adult education	14-week elective undergraduate seminar meeting face-to-face ? hours ? a week	role playing. Soc questioning, completion of organizational cl and spreadsheets
University of New Brunswick	14 working professionals, 3 undergraduates, and 3 graduates in various geographic locations-- students had no business background but were experienced in technological fields	Team-taught by two instructors. 1 with graduate degree in law, 1 with graduate degree in business. Both had considerable experience in business consulting.	14-week required graduate course meeting via videoconferencing 1 hour once per week --Part of a larger diploma program on Technology Management and Entrepreneurship	Discussion and dialogue between among students. Student-led discussions and presentations ab weekly case installments.
Worcester Polytechnic Institute	2 different groups of undergraduates pursuing degrees in engineering, computer science, and information technology	Self-taught entrepreneur with MBA, additional graduate degrees in life sciences	Two 7- week elective undergraduate courses with 2 hour face-to-face meetings once per week	Student-led discussion, application of the to case using var business models
University of Massachusetts Amherst (section #1)	40 undergraduates majoring in business	Self-taught entrepreneur with advanced degrees in education. the designer of RTCM	14-week elective? undergraduate course meeting face-to-face ? times per week	Socratic question polling, debating tracking discussi on blackboard
University of Massachusetts Amherst (section #2)	12 graduates in full-time MBA program	Self-taught entrepreneur with advanced degrees in education. the designer of RTCM	14-week elective? graduate course meeting face-to-face ? hours ? per week	Socratic question polling, debating tracking discussi on blackboard
University of Massachusetts Amherst (section #3)	13 graduates in off-campus, part-time MBA program	Self-taught entrepreneur with advanced degrees in education. the designer of RTCM	14-week elective? graduate course with no formal meeting time and as a result of being taught in an asynchronous format on the World Wide Web	??

References

Znaniecki, F. (1934). The method of sociology. New York: Farrar & Rinehart.