

BRAINFOOD

INNOVATIONS FROM THE CONVERGENCE OF
BUSINESS, MARKETING AND CREATIVE STRATEGIES
WITH LEADING TECHNOLOGY

Case Study

White Paper

A Case Study in Strategic Development *Developing, implementing, evaluating and positioning the signature pedagogy for a prestigious university.*



fabcom
integrated strategic marketing

UAT: THE DIFFERENTIATION OF YEAR ROUND BALANCED LEARNING

In 1990, UAT began developing, implementing, evaluating and improving its signature pedagogy for technology students, “Year-Round Balanced Learning” (YRBL). A key component of YRBL’s optimized learning is year-round immersion in a technology discipline. In light of the fact that UAT students don’t take the summer off, they develop lifelong learning practices and thinking habits, and produce complete, complex works, all of which help them thrive after graduation. The year-round program enables UAT students to complete a Bachelor’s degree, on average, in 3.6 years.

As a result of the changing economy a number of colleges and universities have begun to explore the option of providing Bachelor’s degree programs that are intended to be completed in three years. The impetus of these three-year degree programs is strictly economic; their stated goal, in every case, is to reduce the institution’s costs as well as the students’ tuition and other expenses.

Not only could UAT credibly lay claim to being a pioneer in accelerated degree programs, with a 20-year track record, more importantly, UAT could claim a critical point of differentiation from all other institutions’ three-year programs – UAT’s accelerated year-round degree program was developed specifically as an integral part of an evolving, optimized pedagogy, not simply as a cost-saving solution. This is an undeniable point of leverage for UAT relative to other colleges—even “name” institutions—which is need to exploit fully through marketing and public relations with UAT’s various audiences.

As others adopt, primarily because of economic drivers, the concept of year-round learning is becoming more

mainstream in higher education. As greater cultural acceptance is achieved, the term itself becomes less of a differentiator and more of a generic category. We may well soon approach a tipping point where “year-round learning” is an option available at many colleges and universities, just as “call waiting” became an option in every phone service package.

In this sense, UAT’s very success with YRBL required innovation in how the concept was communicated. UAT owns significant advantages in so far as YRBL is an integral pedagogical approach, rather than a money-saving “gimmick.” However, this edge could be lost in translation without a new positioning that conveys UAT’s uniquely in-depth approach to accelerated learning with language that can be not only trademarked, but owned in the mind of the public.

It was never about the acronym, just as it was not about merely saving money. What we have in YRBL is a fundamental learning platform that relates intimately to UAT’s culture. This platform requires branding that communicates its power and relevance in a marketplace that has caught up to one single benefit of YRBL, rather than its value as a whole.

For this reason, we recommended a repositioning that will enable UAT to continue to stand out from the crowd by promoting the learning platform as a whole. Because of shifts in the marketplace, merely highlighting “year-round learning” is no longer a market-leading position. It’s the uniquely effective pedagogy, of which year-round learning is one element, that distinguishes UAT from the pack. By shifting the spotlight to the entire pedagogy, UAT covers its flank against competitors, while successfully establishing and

Strategy

maintaining the perception that year-round learning is not an afterthought, but an integral element within an exclusively holistic pedagogy.

OPTION 1:

Synchronic Learning™

Learn. Experience. Innovate.

Synchronic is a little-used term that is rich with beneficial implications for promoting UAT's pedagogy.

Etymology: From Ancient Greek σύν (*sýn*, “with, in company with, together with”) + χρόνος (*chrónos*, “time”)

Adjective

synchronic

1. occurring at a specific point in time.
2. (*linguistics*) relating to the study of a language at only one point in its history.

Synchronic relates to time, as in year-round learning, but is also highly suggestive of timeliness and accuracy; of providing what's needed at just the right moment in a given process. This captures the ethos of UAT's educational approach in a single, concise implication: that UAT is distinctly responsive to the needs of technology learners today. This synchronization extends beyond just its students to the marketplace as a whole.

Providing the right stimulus at the right time is essential to any excellent education. But UAT must also communicate its commitment to the leading edge of technology. *Synchronic* supports both of these ideas

simultaneously. It's a highly current, contemporary take on what might otherwise be a classical concept.

In fact, *synchronic* is one of those rare terms marketers seek out, which sound familiar enough to establish positive associations, but which is nevertheless only actually used in obscure contexts, in this case linguistics. The fact that it is little-used presents a highly desirable opportunity to own it in this space, and to assign it the compelling meaning of a brand.

It should be noted that the term *synchronic learning* is not in opposition to “asynchronous activities” like online learning. In its broader meaning of the right stimulus at the right time, synchronic learning can be understood to include all the elements of the UAT pedagogy which collectively combine to be uniquely effective.

SynchronicLearning.com was secured. Available options were: SynchronicDegree.com, SynchronicEducation.com and SynchronicCurriculum.com.

OPTION 2:

Meta Curriculum™

Learn. Experience. Innovate.

Meta learning is a term already in use in certain educational and business settings, which never the less offers some strong assets for branding the UAT pedagogy. In its most literal application, it describes “the process by which learners become aware of and increasingly in control of habits of perception, inquiry, learning, and growth . . .” Donald B. Maudsley (1979). This presents a strong tie-in to UAT's mission of teaching not just subject matter, but the ability to learn.

Strategy

In the original Greek, one of the original meanings of meta is “beyond.” Today, the term meta relates to an overarching perspective, relating to what is beyond. In this sense, metaphysics constituted “the science of what is beyond the physical.” In the context of UAT, *meta learning* relates to what is beyond traditional learning, the next step in a progressive history. This implies that *meta learning* is also a higher learning, where both expectations and outcomes are beyond the norm.

One caveat is that because the term is already in use, although not in this precise context, use could cause confusion, particularly in orthodox academic circles, which could require energy and effort to clarify.

MetaCurriculum.com has been secured.

OPTION 3:

Aeon Learning™

Learn. Experience. Innovate

Pronounced “eon,” it’s a Latin term which originally meant “life” or “being,” but which came to take on the additional meaning of “forever” or “eternal.” All these are positive associations that can support the promotion of UAT’s unique pedagogy. It’s alive and vibrant and yields results that are lasting; it’s a long-term approach to learning that is efficient in the near term as well.

Interestingly, Plato used the word aeon to denote the eternal world of ideas, which he conceived was “behind” the perceived world, as demonstrated in his famous allegory of the cave. The classical reverberations of the term support UAT’s strong academic positioning. At the same time, there is sufficient leeway within the term to create unique meaning for our brand. Aeon ties together the Classical World, which is at the roots of all Western education, with a sense of timeliness that is highly relevant to the contemporary context in which UAT excels.

AeonLearning.com was secured.

STANDARD 6 Semesters x 2 Classes



S1



S2



S3



S4



S5



S6

ACCELERATED 4 Semesters x 3 Classes



S1



S2



S3



S4

Synchronic Learning™



The Promise

THE PROMISE

Not only can you complete a degree from one semester to two years sooner than your contemporaries, you will also learn more and understand more thoroughly –

You will be taking classes specific to your area of interest from Year One.

You learn with the same technology and methodologies used in your field.

You develop lifelong optimum learning practices and thinking habits.

You will produce complete, complex works.

You will learn how to work effectively as part of a technology innovation team.

Included is a summary of a comprehensive survey of recent news and journal articles regarding three-year college degrees which verifies UAT's strong position on this brand proof point. References are listed at the end of this document and hard copies of reference articles are available for review.

For many years, the American post-secondary education model has been four years of study to complete a Bachelor's degree. In Great Britain and Europe, the standard model is three years of college credits to earn a Bachelor's degree (or its equivalent). The reality, at least in the U.S., is that, on average, it actually takes students five or even six years to complete a Bachelor's degree. Only 57.5% of college students pursuing a 4-year degree actually finish their degree within six years of starting (U.S. Department of Education, Digest of Education Statistics, 2009). Finances are most often given as

the key reason that a degree takes five or six years – students and/or their parents can't typically pay for four consecutive years of education. Time away from studies for a job to pay for college means that most students do not finish in four years. The most recent statistics from the Education Department show that only 4.2% of U.S. undergraduates finished with Bachelor's degrees in three years.

While it has always been possible for an ambitious college student to take an increased load of classes or attend summer school in order to finish a degree in less than four years, very few colleges or universities have offered specific, formal programs for accelerating the degree path. However, in today's troubled economic climate, a number of colleges have now begun to consider three-year degree programs in order to reduce their costs and students' tuition. In the past 15 months alone, at least a dozen schools have rolled out three-year programs including the University of North Carolina, Greensboro ("UNCG in 3") and Hartwick College in Oneonta, New York.

One of the first colleges to offer a formal three-year degree program was Bates College in Lewiston, Maine, which has offered a three-year degree program since 1965. Florida State University launched a three-year program in 2000, but about 40% of three-year enrollees still take four years to complete their degree.

Colleges who have recently started to offer three-year programs

Southern Oregon University

Lipscomb University (Nashville, TN)

Judson College (Alabama)

Manchester College (Indiana)

Seattle University

Upper Iowa University

Ball State University (Indiana)

University of Washington

Arcadia University (Philadelphia)

Holy Family University (Philadelphia)

Ursuline College (Ohio)

Franklin and Marshall College (Pennsylvania)

Southern New Hampshire University

Lake Forest College (Illinois)

Currently, State University systems in Arizona and California are actively considering a three-year option.



Names used by colleges for three-year degree programs

Note that the majority are simply generic descriptors (“Three-Year Degree Program”), not marketing or positioning names, and only two use any graphics to accompany the name. None of these names make any reference to any quality of the program, or attempt to position the program, other than as to its shorter duration.

School	Positioning
University of North Carolina Greensboro	UNCG in 3
Hartwick College	Three-Year Bachelor’s Degree Program
Bates College	Three-Year Baccalaureate Programs
Florida State University	Degree in Three
Southern Oregon University	Three-Year Baccalaureate Programs
Lipscomb University	Three-Year Degree Plan
Judson College	None
Manchester College	Fast Forward
Seattle University	Three-Year Baccalaureate Degree
Upper Iowa University	None
Ball State University	Degree in 3
University of Washington	The Husky Advantage
Arcadia University	Three-Year Degree Programs
Holy Family University	Accelerated Degree Program (working adults only)
Ursuline College	Accelerated Degree Program (working adults only)
Franklin and Marshall College	Accelerated Degree Option
Southern New Hampshire University	Three-Year Degree Program
Lake Forest College	Three-Year Degree Program

References

The Washington Post, 5-23-09

The Wall Street Journal, 5-12-10

The University of North Carolina, Greensboro, University News, 2-22-10

The New York Times, 2-25-09

University of Washington News, 10-29-09

Newsweek, 10-17-09

Black Enterprise, 6-29-10

ABC News, 3-21-10

Inside Higher Ed, 2-17-09

U.S. News & World Report, 8-19-09

USA Today, 2-24-09

Los Angeles Times, 4-29-10

The Chronicle of Higher Education, 6-9-09

Institutions' websites

**Appendix 1 for white paper developed by education leadership.

FABCOM IS A FULL-SERVICE STRATEGIC MARKETING, PR, AND ADVERTISING FIRM

Principal: Brian Fabiano

Number of Employees: 29

Local Area Billings: \$30.7 Million*

Location

7819 East Greenway Road

Suite 5

Scottsdale, AZ 85260

Contact

phone (480) 478-8500

fax (480) 478-8510

www.fabcomlive.com

*Amortized for media billings as calculated in the Phoenix Business Journal Book of Lists.

Appendix 1

YEAR-ROUND BALANCED LEARNING: CREATING TECHNOLOGISTS FOR THE FUTURE

February 7, 2006

INTRODUCTION

UAT's mission focuses on educating and empowering students with a passion for technology such that they are prepared for a lifetime of contribution in an increasingly global and complex world. Because we deliver programs solely in technology disciplines, our educational pedagogy focuses on creating the experiences and environments that develop the minds of our students to meet the demands of the increasingly dynamic technology environment. Our approach is an integration of successful content delivery methods designed for the next generation of learners, a year-round learning environment that continuously engages the student and a tiered curriculum approach intended to develop independent thinkers, designers and innovators.

Over our years of study and evaluation, it has become clear that technology, unlike other disciplines, has greater expectations tied to continuous learning, thinking and creation. We believe this is partially because individual technologies are so transitional that a lack of vigilance and ongoing awareness on the part of practitioners quickly renders them incapable of practicing effectively. While other disciplines such as medicine may require lifelong learning to maintain relevance in practice, the pace of learning within technology is greatly increased in comparison to other disciplines. We also partially credit this requirement to the fact that technology provides the bridge between our advances in scientific understanding of our universe and the application of this understanding to enhance life and society. With these unique expectations within the discipline, UAT believes that technology, like the professions of Law, Medicine and Engineering (Shulman, 2005), requires a signature pedagogy to produce the most effective practitioners.

UAT also recognizes that the modern college student is different than previous college students: today's students approach learning with a value set that emerged from experiences that incorporated exposure to technology and myriad environments at very young ages. As one example of the change from prior generations, today's student values just-in-time access to information and direction over memorization (Taylor, 2005). Adding this understanding to our knowledge of how to educate within technology disciplines creates the conceptual underpinning of our learning methodology.

Finally, changes in the way technologists and businesses operate over the past 20 years necessitate that graduates have high levels of emotional intelligence and the ability to create and work within collaborative environments. Virtually no technologies today are created by one individual, and individuals with higher levels of emotional intelligence tend to be more successful than their peers with lower emotional intelligence (Goleman, 1995). Therefore, UAT focuses on collaborative and team-driven learning approaches.

UAT has spent the last 15 years developing, implementing, evaluating and improving its signature pedagogy for technology students. Delivery methods focus on creating active lifelong learners, thinkers and innovators using

metacognitive strategies appropriate to the technology environment and tailoring experiences to today's learners. Through the course of the 1990s, the University's Center for Learning Research (CLR) conducted research on the best learning practices. Renamed the Center for Learning Excellence (CLE) in 2002, a revitalized interdepartmental group was formed. This group researches the best practices in technology education on an ongoing basis. From this research the University reviews and enhances our delivery model on a regular basis. This approach ensures that our methods keep pace with the unique and changing nature of the disciplines we deliver. We consider this ongoing improvement necessary to maintain the relevance of the pedagogy. (Shulman, 2005)

YEAR-ROUND BALANCED LEARNING (YRBL)

With the practicing requirements of successful technologists held firmly in mind, the University developed our signature approach to technology education using the following contributing and balancing pieces:

- **Delivery Methods**—A combination of synchronous and asynchronous content delivery methods that integrates technology into educational experiences and encourages the development of lifelong learning habits. Our delivery methods are designed to address all learning styles.
- **Tiered Curriculum**—A 3-tiered approach to technology program design that acts in concert with the other elements to move young college learners from passive reception of knowledge to active discovery, design and innovation.
- **Learning Environment**—An interwoven approach to the learning environment that encompasses scheduled offerings, customized curriculum and the year-round nature of our programs. This approach to the learning environment meets the needs and expectations of both the technology discipline and the modern learner.

The remainder of this document will look at each of these components in detail.

DELIVERY METHODS

Content delivery at UAT was developed to actively address all learning styles and prepare students to engage in a lifetime of learning after leaving the University. Students are prepared through both online and resident experiences that incorporate all five delivery methods within the model. Online experiences are particularly important to the students as trends in learning and technology tell us that online learning will be a prevalent form of lifelong learning over the next half-century. The five methods—lecture, group recollection, tutorial instruction, student teachback and discovery learning—are based on both synchronous and asynchronous interaction in all classes.

Additionally, UAT uses an online learning management system to support our content delivery. This curriculum backbone provides a common system through which students and faculty can access the materials and asynchronous components of all classes. Currently, the University has contracted with eCollege, a third party vendor that supports our distance curriculum, to provide an online shell for each resident course called eCompanion. eCompanion offers most of the benefits of the full eCollege distance education shells including the following:

- The ability to post materials in multiple media including simple text documents, powerpoints, Flash presentations, video and audio files

- The ability to host asynchronous discussions through threaded discussions
- The ability to deliver and evaluate knowledge through assessments such as tests, quizzes and projects
- The ability to build and maintain a rich webliography to support additional research related to or supportive of class materials
- A dropbox feature for the submission of assignments and projects that also provides lasting records of student work

On campus, UAT's facilities design and technology provide a profoundly rich technology infused learning environment. Students work in modifiable learning areas which adapt to multiple learning experiences. Additionally, our continuously upgraded and updated computer commons is designed to encourage collaborative learning activities.

LEARNING METHODS

The five types of content delivery combine to actively address all learning styles and move learners from purely cognitive activities to metacognitive practices that will effectively create lifelong learning capacity. Through the course of their curriculum, exposure to these delivery methods moves students from cognition or simple understanding in exercises where information and method are directly supplied by the faculty member to active thinking and planning centered on problem solving and design. This "thinking about thinking" is referred to as metacognition.

The five styles are used in combination in all online and resident classes that the University delivers. The facets include Modified Lecture, Tutorial Learning, Group Recollection, Student Teachback and Discovery Learning. Each facet is more fully described as follows:

Modified Lecture

This method is an instructor-facilitated interactive presentation of information through a mix of dialogue and discussion in both on-campus classes and through threaded discussions on the eCompanion web site. The goal is to put information into the hands of the students while engaging them in the learning process as active participants. Faculty's role is to present information or organize the presentation of information to students. Elements of modified lecture can take the form of on-campus instructor lectures, distance "lecturettes," printed and digital presentation of material with effective questioning techniques, anecdotes, analogies and examples of professional experiences from industry.

Tutorial Learning

Tutorial Learning is a presentation of new material through a step-by-step process with either specific guidance and directions from the instructor or self-directed learning following instructional guidelines provided in an online format. The goal of tutorial instruction is to reinforce the cumulative success of all participants in a hands-on skill-building experience. Tutorial teaching may utilize verbal, digital or printed tutorials; simulations; case studies; interviews; learning games and study guides.

Group Recollection

This method provides the greatest measure of information understanding and retention. During Group Recollection, students are informally organized into teams to recall and apply their understanding of previously covered materials. Students collaborate and work in teams to create technologies, solve problems and complete projects. Group Recollection teaches valuable work skills and ethics that parallel the actual workplace. Faculty's role when using this method is to facilitate teamwork and the group learning process. Group Recollection may include collaborative research, preparation of presentations, review groups, student-led discussions, brainstorming and other creative problem-solving activities.

Student Teachback

Student teachback creates an opportunity for students to develop and present new material to their peers. As a learning method, teachback creates investment by making ownership of knowledge a student responsibility instead of solely the realm of the faculty. The goal of this method is to allow for creativity, assimilation and retention while developing both self-confidence and professional communication skills. Elements of student teachbacks may include verbal, digital or print presentations.

Discovery Learning

Discovery Learning methods work within the curriculum are structured to move students from passive recipients of information to active knowledge discoverers. Discovery Learning works at three levels within the UAT environment. It can be articulated as stages within a class but also is expressed in the tiered curriculum design that drives students towards the completion of complex work within their disciplines. In the first level, known as guided-discovery, faculty set both the outcome expectations and the methods or process to achieve the outcome. Students are supplied both expectation and process guidance, and students are encouraged to evaluate their own cognitive processes. In the second level, known as goal-based discovery, faculty set outcome expectations, but the process or method to reaching the outcome is open to student discretion. Students work individually or in teams and compare methods and processes across teams. In open-discovery, both outcome and process are proposed by the students, and the faculty member serves as a supporting resource, progress checker and mentor.

TIERED CURRICULUM

The next element within our signature pedagogy is the University's tiered curricular approach to technology program design. Based on feedback from faculty, industry, alumni and students, this multilevel approach was developed to ensure that our students not only continue to receive the latest in applied technology but surround and balance those skills with grounding theory and a synthesis product (i.e., complete, complex works) in all discipline areas. The three-tiered approach moves students through coursework designed to present the following:

Concepts

Concepts courses are designed to provide the students with background and fundamental skills so that they may have an understanding of the intellectual and systemic underpinnings of their technology discipline. These courses may be considered the last “pure information delivery” courses they will experience at UAT and provide the basis upon which dynamic application and discovery can occur.

Skills Development

Skills Development courses are designed to expose students to a myriad of the latest technology tools associated with their programs. This can range from software packages and applications to networking hardware, communication and writing within the discipline. Students produce complete works at this level in their disciplines through guided or goal-based discovery learning techniques.

Synthesis

Synthesis courses are designed for students to work independently or in teams to apply their knowledge to broader projects and produce complete, complex works in their discipline. Students are encouraged to propose their own projects and define the methods or process by which the project will be completed. Generally, these courses are approached from a “tool agnostic” standpoint where the technology chosen to complete the project is a student choice and is based upon the appropriateness of the tool to the outcome rather than prescribed by the class itself. These courses are focused towards larger, real world projects.

THE LEARNING ENVIRONMENT

Combined with our tiered curriculum and delivery methods is our unique approach to a year-round learning environment. Today’s learners have busy lives even as first time, full time college students. To meet the demands of learning in the technology era, UAT has interwoven several elements to build a profoundly rich learning experience. These elements are:

- Flexible Scheduling
- Year-round Learning
- Customized Curriculum and Program of Study

This combination of flexible scheduling and customized curriculum in conjunction with our year-round environment continuously engages our learners in a technology rich educational environment whether they choose to stay on campus or travel for a semester.

Flexible Scheduling

UAT builds its course offerings each semester with a variety of scheduling models including resident, blended and fully online courses. With out-of-state residents constituting approximately 90% of our population, students often travel over the summer months visiting family or completing required internships in their programs so this facet of our signature pedagogy is not only beneficial to modern learners but is required to meet their needs.

Year-round Learning

While flexibility on when and where learning occurs is key to the modern learner, year-round immersion in a UAT technology discipline is equally important for two reasons. Firstly, one expectation of our graduates is that they will have worked in collaborative teams to produce complete, complex works in their discipline as undergraduates. Taking the summer (or any semester) off can make the completion of team projects nearly impossible. Secondly, UAT believes that students should experience the lifelong learning practices and thinking habits that will be needed after graduation; stopping learning for a semester does not reflect this reality. Therefore, UAT's degree programs are year-round in nature.

Customized Curriculum

This element in the learning environment at UAT allows student to combine customized classes into their Program of Study. This makes a UAT technology degree as flexible in terms of content as it is in terms of delivery. Students can combine the following customized curriculum options to enrich their learning experience whether their schedule is purely resident, purely online or some combination of the two.

- Applied Project (team-based or individual)

Applied Projects encourage students to exercise their knowledge while working toward a significant goal. Students identify a desirable goal, the steps to reach that goal and then follow through to achieve that goal. Challenges include setting specific milestones for project progress, as well as identifying projects that can be completed and are worthy of completion. Generally speaking, Applied Projects are considered synthesis level work in the curriculum.

- Applied Research (team-based or individual)

Students pursue research on a topic of their choosing. The result of this class is an extension of the knowledge and/or application in the area. Students review the state of the art as it exists and create a literature review. They propose a contribution to the knowledge base in the area, generate that knowledge, test it and communicate the results. Students interact with their advisor to discuss analytical issues: methodologies, statistics, data collection, possible outcomes, etc., pertaining to their line of inquiry. When students complete this course they will have a work that can be added to their portfolio. Applied Research is considered synthesis level work within the curriculum.

- Community Service

The Community Service course is designed to provide an exceptional community service learning opportunity to apply academic knowledge and skills to community-based issues and needs. Through the course, students gain a greater understanding and appreciation of a variety of core issues, the challenges they present and possible solutions. Students' experiences provide them with a unique set of learning opportunities. Community Service is considered a concepts level portion of the curriculum.

- Internship

Internships are considered a supervised, practical experience that is the application of previously learned theory. Employers/Sponsors work with the student to meet specific objectives and/or learning goals and provide special mentoring or networking opportunities. In exchange, the intern helps the employer/sponsor in meeting overall work goals for the company. Internships must be related to the student's program of study. Internship is considered synthesis level work within the curriculum.

- Independent Study

Independent Study is recognized as a way to individually facilitate reaching educational goals. The student may explore an area of study that the University does not currently offer as a course. Independent Study requires a high level of student self-direction and self-motivation in order to research a particular subject. An Independent Study is not conducted in a regular classroom setting and can range in application within the tiered curriculum from concepts through synthesis levels. It is designed so that a student can communicate with an instructor on a periodic basis to evaluate progress.

UAT's signature educational delivery utilizes carefully crafted and balanced elements that interweave to create outcomes such that our graduates are prepared to be thinkers and innovators in technology. As students progress in their programs, the delivery methods, tiered curriculum and year-round learning environment supports accomplishment and increasing complexity in work. Students become lifelong learners, well versed in the techniques required to not only maintain relevance but lead within their disciplines. This being said, the nature of technology is change. Therefore UAT continuously looks for additional best practices in modern learning that could be applicable and provide improvements to this system.

References:

- Bruner, J. (1983). "Education as Social Invention". *Journal of Social Issues*, v39, pp.129-141.
- Goleman, D. (1995). *Emotional Intelligence*. Bantam Publishing.
- Livingston, J. A. (1997). "Metacognition: An Overview". Retrieved from the Internet from <http://www.gse.buffalo.edu/fas/shuell/cep564/Metacog.htm> on October 30, 2005.
- Senge, P. (1990). *The Fifth Discipline*. Bantam Publishing.
- Shulman, L. (2005). *The Signature Pedagogies of the Professions of Law, Medicine, Engineering, and the Clergy: Potential Lessons for the Education of Teachers*. Paper presented at the Math Science Partnerships (MSP) workshop "Teacher Education for Effective Teaching and Learning," hosted by the National Research Council's Center for Education, Irvine, CA.
- Taylor, M. (2005, April). "Generation Next Comes to College", 2005 Collection of Papers on Self Study and Institutional Improvement. Higher Learning Commission of the North Central Association of Colleges and Schools.

White Paper Authors:

Dave Bolman

Chief Academic Officer, UAT

Rebecca Whitehead

Dean, UAT