In today’s diverse, global economy, virtual teams have become a workforce reality. Microsoft’s recent $8.5 billion purchase of Skype positions the software giant at the helm of the enterprise collaboration market. As the largest deal in Microsoft’s history, the company’s investment in voice, video and sharing capabilities indicates confidence that our work environment is increasingly becoming more “virtual.” Multinational companies must rely on technology to fuel their futures as they respond to global events (such as the earthquake and tsunami in Japan, and revolution in Egypt organized on Twitter) with cultural sensitivity and competitive strategy. Further, on the domestic front, the lingering recession and collapse of the real estate market have forced organizations to creatively find ways to simultaneously reduce cost and increase global marketplace competitiveness. It is no surprise that virtual teaming is an increasingly popular organizational tool. While it helps companies trim and balance the corporate budget by cutting down on travel expenses and excessive office space, it also acts as a change agent for synergizing and forming geographically diverse cross-functional teams of employees to partake in an emergent area that is being leveraged for better corporate competition. Across the board, the companies showing record profits in today’s sluggish economy look to technologically savvy collaboration mechanisms to build team success.

Furthermore, companies that approach the virtual workforce as a progressive and competitive strategy, and can fully embrace and leverage the benefits of virtual teaming, will be the ones that survive and thrive in the coming decades.

Throughout the United States, home prices have declined in value and homeowners wanting job relocation instead find themselves upside down and under water. Companies have been forced to respond to job-related relocation costs by finding solutions. By optimizing technology and virtual teams, companies can geographically expand their network of skilled workers and attract the best talent. As it stands today, virtual teams are growing at an unprecedented pace. In fact, the post-recession “new normal” is an office without walls that calls for cooperation and teamwork across borders.

In short, virtual collaboration and teaming, defined as a team of people working together from disparate locations on a specific project, is increasingly common place in everyday business. The team’s most enterprising colleagues may not sit near one another, nor would they be in the next building, the next state, or even the next country. Today’s distributed workforce environment demands that employees successfully interact and work with colleagues 100 miles away or halfway around the world on a daily basis. Furthermore, companies that approach the virtual workforce as a progressive and competitive strategy, and can fully embrace and leverage the benefits of virtual teaming, will be the ones that survive and thrive in the coming decades.

A December 2010 Brandman University commissioned survey, Virtual Work Environments in the Post-Recession Era, conducted by Forrester Consulting, of senior leaders and hiring managers in America’s large and Fortune 500 companies (those with at least 5,000 employees), confirmed that adoption
of virtual teaming is growing across industries. The survey found 40 percent of the respondents said that at least 40 percent of their employees work on virtual teams. Further, 21 percent of those surveyed reported that 61 percent or more of their employees work in virtual teams.

Adoption and Acceptance of Virtual Teams

Today’s workforce truly transcends geographic boundaries and tomorrow’s will likely be dominated by virtual teaming. In fact, the survey suggests that 56 percent of the hiring managers surveyed expect that virtual teaming will steadily or greatly increase in their company. Showing support for this trend, 61 percent said their company will allow more people to telecommute or work from home in next three years.

But while the survey revealed that up to 60 percent of employees are estimated to be using teaming technologies daily (such as text messaging, instant messaging and telephone conferencing), skepticism about the perceived effectiveness of virtual teams continues. Survey results also indicate that hiring managers’ perceptions of the quality of work and employee’s productivity on virtual teams lags behind the pace of adoption. According to the survey, many managers still believe that virtual collaboration impedes worker accountability, creativity, and innovation, which are critical assets as companies strive to stay competitive in the post-recession world. In qualitative interviews, employers have also expressed concern about reduced potential for advancement in a distributed work environment.

Resistance to Virtual Teaming as Progressive Strategy

While the use of virtual teaming is increasing, its growth occurs in the absence of perceived value-added benefits. While 61 percent saw virtual teaming as an effective business strategy for reducing real estate and travel costs, less than 20 percent responded that the most important drivers of virtual teams were enabling growth opportunities in emerging markets, allowing employees more flexibility and more job satisfaction or promoting an environmentally friendly business.

Furthermore, less than 20 percent considered social media a viable business tool for connecting with global markets. For example, virtual teaming can help reduce the barriers associated with emerging markets, but hiring managers surveyed did not report heavy utilization of technologies that foster global communication such as blogs, Twitter, Skype and wikis. More than 65
Virtual Work Environments in the Post-Recession Era

percent of the respondents reported that employees never use wikis, Twitter or Facebook and more than 55 percent said their employees never use blogs or LinkedIn. However, up to 60 percent of hiring managers confirmed their employee’s daily usage of more traditional collaboration tools such as text messaging, phone conferencing and instant messaging.

Motivations That Drive Companies to Implement Virtual Teaming

A company’s motivations for adopting virtual teaming hinges on two critical areas according to most of the hiring managers surveyed: cost containment (61 percent) and recruitment (59 percent). Other motivations cited were employee job satisfaction, opportunities to access emerging markets and environmental sustainability, shown in chart above.

Problems, Perceptions and Challenges with Virtual Teams

Along with highlighting the benefits of virtual teams, the survey revealed that nearly half of the respondents have concerns about the challenges faced by virtual team managers. The leading concern mentioned was building trust among employees (57 percent). Other concerns are communicating effectively (49 percent) and managing projects and deadlines with employees not physically present (43 percent). Many respondents also felt that telecommuting was a barrier to creativity and building team consensus.

Important company drivers for virtual teams are to reduce travel and office real estate (61%) and allow selection of employee hires without concern for where they live (59%)

Base: 135 human resource professionals and senior executives from large, enterprise, or Fortune 500 organizations.
Source: Changing Virtual Work Force Survey, a commissioned survey conducted by Forrester Consulting on behalf of Brandman University, December 2010.
Additionally, in qualitative interviews, hiring managers reported that virtual team employees are concerned about opportunities for advancement within the company because they lack face-to-face interaction with their supervisors.

The prevailing attitude of hiring managers surveyed could be described as viewing virtual teams as a “necessary evil,” a method of doing business that their company must adopt to survive and thrive in today’s changing global economy. But hiring managers sometimes fail to recognize the opportunities afforded by virtual teaming when they focus on bottom-line benefits like cost-cutting and real estate savings. The survey found that the benefits and disadvantages of virtual teaming are often in conflict. For example, the more hiring managers felt that virtual teaming helped their company save real estate and office expenses, the less they felt that virtual teaming helped them recruit talent regardless of geography or that the flexibility of working on a virtual team increased job satisfaction. Such findings illustrate that adoption of virtual teaming is economically driven but done with low perceptions of value-added benefits.

Effective Management of Virtual Teams

Managers agree that virtual teaming presents a number of benefits, but respondents express concern about efficacy, productivity and team

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### Establishing trust and communicating effectively are manager challenges

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earning trust/comfort level with employees not physically present</td>
<td>57%</td>
</tr>
<tr>
<td>Effectively communicating with employees remotely</td>
<td>49%</td>
</tr>
<tr>
<td>Managing projects/deadlines successfully and efficiently</td>
<td>43%</td>
</tr>
<tr>
<td>Creating a sense of team consensus during decision-making</td>
<td>30%</td>
</tr>
<tr>
<td>Conducting productive group meetings with clear action items/outcomes</td>
<td>24%</td>
</tr>
<tr>
<td>Managing employee satisfaction</td>
<td>22%</td>
</tr>
<tr>
<td>Providing timely assistance as needed remotely</td>
<td>17%</td>
</tr>
<tr>
<td>Fostering creativity</td>
<td>14%</td>
</tr>
<tr>
<td>Managing career paths</td>
<td></td>
</tr>
</tbody>
</table>

### Good communication skills, setting performance outcomes, and building team trust are traits of good virtual team leaders

<table>
<thead>
<tr>
<th>Trait Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhibit excellent communication and collaboration tool skills</td>
<td>57%</td>
</tr>
<tr>
<td>Ability to set clear job responsibilities and performance and behavioral expectations through electronic...</td>
<td>56%</td>
</tr>
<tr>
<td>Understand how to build team trust and commitment no matter where team members are located</td>
<td>47%</td>
</tr>
<tr>
<td>Ability to drive/foster a vision for team success</td>
<td>36%</td>
</tr>
<tr>
<td>Ability to establish open, honest, and frank team communication</td>
<td>34%</td>
</tr>
<tr>
<td>Ability to manage projects</td>
<td>33%</td>
</tr>
<tr>
<td>Driving consensus around decision-making in a virtual environment</td>
<td>27%</td>
</tr>
<tr>
<td>Fostering creativity in a virtual environment</td>
<td>11%</td>
</tr>
</tbody>
</table>

Base: 135 human resource professionals and senior executives from large, enterprise, or Fortune 500 organizations.

Source: Changing Virtual Work Force Survey, a commissioned survey conducted by Forrester Consulting on behalf of Brandman University, December 2010.
management. In recruiting managers for virtual teams, more than half the respondents said they are looking for candidates who exhibit excellent communication and collaboration skills (57 percent) and the ability to set clear job responsibilities and expectations with the use of electronic tools (56 percent). Approximately half look for a manager who understands how to build team trust and commitment without the benefit of face-to-face contact (47 percent).

Business in Focus: Case Studies of Successful Virtual Teams

While many companies still view virtual teaming as a “necessary evil,” others have embraced the concept as a progressive strategy to foster growth, penetrate emerging markets, and contribute to human and environmental sustainability. The following case studies highlight the virtual team experience at some of America’s most innovative and fast growing companies and illustrate how virtual teaming can be a successful strategy for small, medium and large corporations alike. CEOs and managers of companies that approach virtual teaming as a competitive strategy discuss breaking the barriers (perceived or real) of virtual teaming, and how they build trust, measure accountability and increase productivity among their team members.

Case Study: PepsiCo
Solving Local Problems Globally With Virtual Teams

PepsiCo offers the world’s largest portfolio of billion-dollar food and beverage brands, including 19 different product lines that generate more than $1 billion in annual retail sales each. The company’s main businesses — Quaker, Tropicana, Gatorade, Frito-Lay, and Pepsi Cola — also make hundreds of other enjoyable foods and beverages that are respected household names throughout the world. With net revenues of approximately $60 billion, PepsiCo’s people are united by a unique commitment to sustainable growth by investing in a healthier future for people and our planet. PepsiCo calls this commitment Performance with Purpose: PepsiCo’s promise to provide a wide range of foods and beverages for local tastes; to find innovative ways to minimize our impact on the environment, including by conserving energy and water usage, and reducing packaging volume; to provide a great workplace for associates; and to respect, support, and invest in the local communities where they operate.

PepsiCo’s Finance University, a Performance with Purpose initiative sponsored by the CFO and utilized by thousands of PepsiCo associates, is designed to develop mission-critical functional skills in the global finance workforce. It includes more than one hundred hours of online simulations and self-paced learning.

Some associates also had the opportunity to participate in a virtual Strategic Thinking Application Reinforcement Training program (S.T.A.R.T. action learning) to support and reinforce the transfer of skills to the job. The premise of S.T.A.R.T. involves a senior leader in a PepsiCo business presenting a real world problem to a team and asking its members to collaborate to solve the problem while using a new skill set developed via the self-paced courses. The group follows a methodical process to collaborate over the course of three months, leveraging chat rooms, webinars,
threaded discussions and online collaboration tools to ultimately present recommendations to senior management, also on a virtual platform. This S.T.A.R.T. case study follows a Latin American team of high-performing finance and marketing managers in the chips and biscuits businesses who collaborated to develop a recommendation addressing the need to stay ahead of PepsiCo’s low-price competitors in local and regional markets. The team and their CFO were located in multiple cities across Mexico, with their mentor and other senior stakeholders located in Purchase, NY. Experts were virtually engaged from India and South America to lead knowledge-sharing conference calls as well.

To leverage worldwide expertise and enable the depth of collaboration required, the project was implemented over a series of collaborative tools, both virtual and live. Initially, team members met physically, then dispersed to their home locations and continued their work virtually. They engaged in Cisco’s TelePresence, which members agreed most closely replicated meeting together in the same room, for meetings between NY and multiple Mexico cities. As team members became more comfortable with the virtual nature of the team, they also connected through a customized Microsoft SharePoint site where participants could share information, access materials and contribute to discussion threads that were housed online and remained easily accessible as a reference long after the initial dialogue.

A mentor was based in NY and he, too, leveraged these tools. There was also a separate mentor site on the SharePoint that that allowed mentors from various S.T.A.R.T. cohorts to review the team’s activities and share insights into coaching and collaboration techniques. To virtually collaborate day-to-day, members used Cisco WebEx Web Conferencing and Microsoft Live Meeting. Additionally, the team identified a small number of spots where in-person meetings would be valuable and agreed to meet at certain points in the project to capture insights from the field or analyze data as a group.

Three barriers emerged, according to Brad Haime, a Senior Director at PepsiCo overseeing the Finance University initiative. The first, lack of experience with and low initial tolerance for online content sharing tools, was overcome with training and experience with the tools. Brad explained, “They wanted to see one another and collaborate in person. Practicing with and fully leveraging the content sharing functionality of webinars tools helped to lower anxiety. Once their proficiency with these tools increased, they embraced them.”

The second barrier was cultural. Brad explained, “Relationships are key in Mexico and across PepsiCo. Having a physical connection is very important for earning trust, and working virtually has not been entirely adopted. However, everyone understood that virtual teaming is a necessity in the global corporate environment, and they were willing to learn the tools of the trade.”

Brad also observed that the third and most challenging barrier was the team’s need to manage the ongoing accountabilities of their “day jobs” while participating in a virtual program. This is something that is not completely solved and will continue to improve on with future virtual team projects as Managers of participants are engaged in a more meaningful manner.
Ultimately, PepsiCo senior management was pleased with the team’s recommendations. When the project concluded, the team was commended for presenting, “a game-changing solution to solving the problem.”

Case Study: Savant Company, Inc.
Overcoming Language and Cultural Barriers on Virtual Teams

Newport Beach, CA: Savant Company Inc. is a small company that provides market intelligence, business development, and marketing/sales consulting services for semiconductor companies in emerging and leading-edge markets. Savant Company Inc., works with clients from small startups to Fortune 500 companies on penetrating and positioning existing products in new and emerging markets and publishes selected reports on worldwide business challenges, emerging technologies, technology business trends, specific global market segments, and other topics related to marketing and business solutions in a global economy.

As a company with decades of experience in virtual teaming, Savant has developed a historical timeline to illustrate the adoption of technology facilitating virtual team communications for corporations globally that begins in the 1960s. Fifty years ago, “virtual” team efforts involved little more than letters mailed through the postal service, telephones and travel to face-to-face meetings. In the 1970s, the Fax machine was introduced, reducing reliance on the postal service, but telephones and face-to-face meetings still prevailed. The 1980s contributed conference calls and video conference calls using phone lines, though the use of this technology was still novel. Mobile phones were commonplace but unreliable and operated exclusively as a telephone (rather than today’s multi-purpose mobile devices) and did not replace the land line. Then, from the late 1980s through the end of the 20th century, technology advanced significantly and the workforce environment changed forever. Web related tools like email, instant messaging, client windows, VPNs, VOIP (voice and video over IP) calls and document scanning dominated the work environment. The new century brought cloud computing, 3D video and virtualizations, mobile apps and web based communication tools that are rapidly replacing the need for face-to-face meetings. Farhad Mafe, President and CEO of Savant Company Inc. discussed one of his many experiences with global teaming:

Without solid communication skills and self-discipline, virtual workers are not successful

<table>
<thead>
<tr>
<th>Skill/Attribute</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid communication skills</td>
<td>61%</td>
</tr>
<tr>
<td>Ability to self-pace and work independently</td>
<td>53%</td>
</tr>
<tr>
<td>Accountability for own work</td>
<td>51%</td>
</tr>
<tr>
<td>Technology proficiency</td>
<td>43%</td>
</tr>
<tr>
<td>Ability to resolve conflicts effectively in absence of face-to-face conversations</td>
<td>24%</td>
</tr>
<tr>
<td>Strong project management expertise</td>
<td>21%</td>
</tr>
<tr>
<td>Flexibility to work beyond a 9 to 5 day</td>
<td>19%</td>
</tr>
<tr>
<td>Open to working with multiple cultures/diversity</td>
<td>16%</td>
</tr>
<tr>
<td>Ability to earn trust in remote teams</td>
<td>13%</td>
</tr>
</tbody>
</table>

Base: 135 human resource professionals and senior executives from large, enterprise, or Fortune 500 organizations.
Source: Changing Virtual Work Force Survey, a commissioned survey conducted by Forrester Consulting on behalf of Brandman University, December 2010.
In 2008, Savant Company Inc, worked with a High-Tech Venture Capital Company in Korea that was managing four newly formed startup technology companies. Our task was to develop Web marketing plans and strategies for all the startups in collaboration with their CEOs, Marketing VPs, and the VC management. We also hired a small company in India to help us with some Web programming and database development. The virtual team project consisted of over 34 people in four different cities around the world.

To start the project, we decided to have a series of face-to-face meetings in Korea with all the project participants. In most of the Asian cultures meeting face-to-face is very much required to develop mutual trust and friendship with all the project participants. In the meeting, we realized that a few key people had serious challenges with English language. We decided to hire a professional translator familiar with technical terms. She was a tremendous help in email and document translations, as well as all the communications during the weekly video conference calls.

From day one, we decided to use a systematic document version control and cloud computing to prevent mistakes, document availability issues, waste of resources, quality control issues, and duplication of work. We also scheduled a weekly video conference call to review our progress (almost) face-to-face with our clients and with the development team in India. This model worked very efficiently for everyone.

The entire process was a great experience for all, and the virtual team was able to complete all the tasks on-time and very efficiently.

In describing the project’s biggest challenges and how they were overcome, Mafie explains, “In virtual team projects, it is very important to set a series of guidelines from the beginning (i.e., rules of engagement), to ensure clarity in all aspects of the working model for all the project participants (e.g., weekly conference call, cloud computing utilization, email rules). It is also very important to identify potential challenges and issues very quickly (e.g., language barrier, managing many documents, revision controls), so that they can be addressed promptly.

Case Study: SunGard Higher Education Shared Code Repository Collaborating and Problem Solving Through Virtual Communities

Malvern, PA: SunGard Higher Education provides software and services that help educational institutions find better ways to teach, learn, manage and connect. Its customers include 1800 colleges, universities and foundations in 40 countries, serving more than 14 million students worldwide. Through its Open Digital Campus strategy, SunGard Higher Education collaborates with the higher education community to make digital campus environments more flexible, efficient, innovative and cost-effective. SunGard Higher Education’s parent company, SunGard Data Systems, is one of the world’s leading software and technology services companies and a Fortune 500 company.

Over four decades providing some of the most popular enterprise systems to colleges and universities, SunGard recognized an inefficiency as well as
an opportunity. Many of SunGard’s higher education customers were expending resources developing custom features on their own, often focused on similar extensions or system improvements. Typically they incurred the initial cost of development as well as the ongoing expense of maintaining these extensions. There was not a secure process to share these developments with others or discover whether a need had already been met by another institution’s development effort. SunGard saw that a number of these custom features could be beneficial to the customer community as a whole, but it wanted to figure out a way to leverage the great work people had already put into these development efforts, rather than reinventing the wheel.

After extensive discussions with customers about how to make this happen, in April 2010 SunGard Higher Education introduced the Community Source Initiative, a first-of-its-kind vendor-supported community source forum dedicated to higher education enterprise resource planning (ERP) systems. The initiative was designed to bring together the insights and experience of the company’s extensive user community for the benefit of all institutions; make functionality available faster; and help ensure product quality through functional and technical review.

Through the Community Source Initiative, SunGard Higher Education customers can contribute to and benefit from other individual customer innovations. The Community Source Initiative’s customer-led committees of domain experts work as virtual teams, evaluate and prioritize community-developed submissions and decide which would be valuable additions to the baseline versions of SunGard Higher Education products. Based on the committees’ recommendations, new functionality is tested, documented, added to a product release and then supported by SunGard Higher Education. In this way the initiative contrasts with a traditional open source software model because the software vendor takes on the responsibility of maintaining and supporting improvements developed by members of the community, rather than the community or a third-party vendor providing support.

According to Jack Kramer, SunGard Higher Education’s senior vice president of customer satisfaction, “The Community Source Initiative leverages the expertise and collaborative goodwill of our far-reaching user community to bring more and better solutions to the community faster while helping ensure the quality of those solutions through structured review; and it eases the institution’s burden of continually upgrading local enhancements. Our Community Source Initiative is a proof point of our commitment to our Open Digital Campus vision that is built on collaboration and engagement with our customers.”

Extending the value of the Community Source Initiative is a Shared Code Repository, which serves as a primary tool for the Community Source Initiative committees and members of the global SunGard customer community. Introduced in March 2011, the Shared Code Repository gives customers a secure way to contribute their improvements to the community if they choose, and to find work contributed by others, comparable to the sharing done in community source projects like Sakai, the community source-based learning management solution.
The Shared Code Repository consists of a library of code snippets, scripts, applications and utilities that customers have developed and share with each other on an "as is" basis. The repository supports distributed community development and collaboration with multiple code variations, feature requests and assignment tracking. Customers can quickly set up collaborative development projects with peers working in virtual teams to solve common problems. Using the repository, SunGard customers realize cross-institutional efficiencies for developing new innovations, quicker development and lower development costs than they would realize independently.

Advantages to SunGard Higher Education’s institutional customers are evident. The Community Source Initiative’s virtual design encourages peer collaboration across a worldwide community as people share their own innovations and build on the work of others. In fact, several of the new baseline additions from the Community Source process are the result of cross-institution collaborations to make a customization originally submitted by a single institution more applicable to the broader customer community. Institutions enjoy many of the benefits of open source with the additional value that comes from having SunGard participate as a member of the community. SunGard solutions continue to develop in more rapid and innovative ways, aligned directly to priorities of the customer communities they serve.

Momentum around SunGard Higher Education’s Community Source Initiative is building. Deborah Elias Smith, SunGard Higher Education’s vice president for the Community Source Initiative, quantifies the success of these efforts in measurable results. “In just the first year, we have released 10 customer-developed enhancements into baseline SunGard products through the Community Source process. Another 10 are now in the pipeline for future release, and our solution roadmaps have placeholders for more. At any given point, approximately 60 submissions are being actively worked on by the customer-led review committees, and more than 50 different institutions have made submissions to the Community Source peer review process.”

In just the two months since availability was announced, the Shared Code Repository has more than 600 registered users. Although the number of projects in the repository is still relatively small, keen interest across the SunGard customer community suggests that it, along with the rest of the Community Source Initiative, will continue to be an invaluable resource for SunGard customers and the company in the future.

**Hiring for Virtual Teams**

As the business world moves to a virtual model, companies are looking for employees with specific skills that will make their virtual teams successful. More than two-thirds (72 percent) of the respondents are looking to hire employees with understanding or proficiency in collaboration technologies that fill the tool box of virtual teams (Skype, wikis, web conferencing, virtual project management resources, mobile messaging). In interviews, hiring managers said they are looking for employees who not only know how to use these technologies, but can demonstrate how to maximize their capabilities.

Management skills that have been highly valued long before the introduction of computers in the workplace, such as communication, accountability, flexibility
and the ability to work independently, were cited frequently as skills necessary to succeed on virtual teams. In fact, the top three traits referenced were solid communication skills (61 percent), the ability to self-pace and work independently (53 percent), and accountability (51 percent).

Are College Graduates Prepared for Today’s Virtual Work Environment?

Many college students are not receiving the scope of training necessary to be successful and advance in a career in today’s global work environment. While higher education, particularly schools of business, have long offered training in classical management skills like communication and team building, outside of the computer science department, higher education institutions generally are not emphasizing training in the technology skill sets that were most frequently mentioned as critical to the success of virtual teams. Technical skills are being developed in Information Technology and Computer Science majors and communication skills in business and liberal arts majors, but colleges are not producing a hybrid graduate who is both technologically savvy and a strong critical thinker and strategist.

Brandman University serves non-traditional students, primarily working professionals looking to enhance and advance their career. The university recognizes the gap between higher education output and performance in today’s technologically sophisticated workplace. In response, Brandman developed an innovative curriculum model that mirrors the environment students will find in the workplace. Known as the Brandman iDEAL, this curriculum approach blends classroom instruction with independent self study such as virtual collaboration groups and technology tools to make students proficient in virtual collaboration. As a result, the old paradigm for higher education has transformed from a solely instructor-led monologue to a participatory dialogue that utilizes collaborative technology for optimum learning.

Students frequently work in virtual teams, engage through virtual discussion boards, wikis, blogging and video conferencing, and are held accountable for online engagement and assignments. Faculty members evaluate student performance based on online engagement, participation, communication, project management, overall effectiveness and execution. The result is an enhanced educational experience through active and engaged learning and heightened preparation for career success in today’s technology-driven, networked world.

Today, many universities offer online programs. They all use Internet and web-based tools to replace classroom instruction and create a convenient platform for students. Brandman University has taken this approach a step further by integrating student online engagement as part of its overall curriculum model to meet market needs and prepare students for employment on virtual teams.
Global diversity and virtual teaming is a natural aspect of the Brandman University experience. Brandman University offers adult-learners degree oriented coursework in which students continually, “learn how to work in teams — and more specifically on virtual teams,” which “is an important part of learning how to be an effective leader” according to Maria Cesario, Ph.D., associate vice chancellor of academic administration.

Dr. Cesario teaches OLCU 300 Organizational Behavior. The online course prepares students for working in a virtual environment by assigning virtual teams of four to five members to complete a single paper in one voice for each of two consecutive projects. Because of its fully online platform, the students never meet face-to-face. Teams are chosen randomly (alphabetically) and may be located worldwide. For example, in the Fall semester of 2010, a team included student-members in Sicily, Washington State, California and Hawaii. Much like a corporate virtual team, its members represented three conflicting time zones.

Students encountered barriers and advantages to virtual teaming similar to those documented in the survey. Dr. Cesario observed that the psychological barrier of not seeing teammates initially evoked hesitation in her students. A student named Brandon voiced that, “This is my second course with virtual team projects and it has been a major adjustment from real groups. I think that the lack of actual face-to-face contact is the most difficult part of virtual teams.”

The class requires the use of wikis (defined as a web site developed collaboratively by a community of users) though none of the students had prior wiki experience. Brandman has developed an online tutorial that offers demonstrations on wikis, blogs and online discussion boards. A student stated, “One issue was our team’s lack of understanding of the wiki. If we all knew how to use it we could have gotten started faster. If I was a virtual project manager I would be sure to go through the user guide with my employees to know that they fully understand how to use the wiki.”

As the project developed, the wiki had evolved into a viable virtual conversation tool. Eventually the wiki was recognized as a solution for scheduling difficulties that arose while attempting to synchronize real-time discussions across time zones. One student, Cyle, noted, “Scheduling is the reason I am taking online classes. I work from 11:30 p.m. to 7:30 a.m. and most of my school work is done at inconvenient hours. Trying to schedule a time for discussion with my team was next to impossible.” As the OLCU 300 team members’ comfort levels increased, and they realized the wiki’s power, they overcame their desire to synchronize time. When the synchronization barrier lifted, the wiki was optimized and team dynamics strengthened.

At Brandman University, students who viewed virtual teaming as a progressive strategy also felt that the wiki was just one example of many tools available for successful online collaboration. Dr. Cesario’s student, Manuel, noted that there are other options. He said, “Overcoming
barriers and improving team performance is available through real-time communication media such as web cams, teleconference, instant messaging and social media sites. These modes of teaming would provide a better foundation for the team to build those certain qualities that the blog lacks such as learning each others’ strengths and weaknesses and what makes each member tick.”

Cyle added, “The concept of virtual teams is becoming quite real, but I think companies that are investing a lot of money are putting investment dollars into virtual imaging programs that seem almost real life. I believe a great way to work around the issues early on is to instruct all users to utilize a chat program such as Pronto. Video chat is becoming readily available and with the new iPad and is now even more accessible to students.”

**Leadership**

“I do not believe a person is a leader because they are assigned a leadership position … natural leaders within the group emerged,” a student named Duane observed.

...but I think companies that are investing a lot of money are putting investment dollars into virtual imaging programs that seem almost real life. “

Because virtual team management appears to be an ongoing source of concern for companies, it is important to understand how institutions like Brandman University focus on the role of leadership. Interestingly, no formal project leader is assigned at the start of the class project. Instead, virtual team leaders evolved over the course of the project period. Dr. Cesario noticed an increase in team productivity as individual members’ skills emerged and leaders were able to assign the best person to the task.

Finally, despite a shared longing for contact with their teammates, all students placed a high priority on developing skills that are valuable in today’s competitive job market.

John, a student who was reluctant at first to adopt virtual teaming, said, “Overall the virtual team experience has been good. Being from the old school, participating in a team project of this kind was a challenge. However, after a short time I picked up on the curriculum… the one thing I do miss is the personal aspect of communicating with my fellow teammates. I guess it will take me a little time to get used to the absence of personal contact – but this I believe is the wave of the future.”

Cyle added, “I think success is based on experience, and now that I am getting the experience necessary to see how it works, I will be able to use this tool at the company I work for.”
Virtual Work Environments in the Post-Recession Era
Survey Research Methodology

Findings were obtained through 135 online surveys conducted by Forrester Research between December 17 and December 30, 2010 from senior leaders and hiring managers in America’s large Fortune 500 companies (those with at least 5,000 employees). Study inclusion criteria was geared toward “growth” companies, or those actively or gradually hiring new employees in the current economic climate. As part of the larger study from Forrester, a series of follow-up qualitative interviews were also conducted with hiring managers via telephone in January 2011.