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focus

Judging Research with Impact

Successful research often starts with a belief that you will find something that will make a difference. With business schools spending millions of dollars a year to support faculty research, our findings *should* matter, and at Baylor University's Hankamer School of Business, we have conducted studies that matter for decades.

As professors dedicate years to research, a crowning accomplishment is for their findings to reach others through publication. This issue of Focus features our faculty research that has been published in top journals such as the *Journal of Vocational Behavior*, *Journal of Management*, *Journal of Consumer Research*, and the *European Journal of Information Systems*. The publication of academic research is a conduit for showcasing *potential* impact of research, but its *actual* impact is measured after the research is widely disseminated. In each issue of Focus, we also highlight faculty research that has reached audiences outside of academia. This thought leadership has inspired change within corporations, development of software, industry-supported studies, and practitioners' adoption and implementation of research ideas. How do we judge research with impact? The Association to Advance Collegiate Schools of Business (AACSB) serves as an international accrediting organization for business schools and defines effective research as diverse, highly visible, and accessible to the public at large.

These factors provide measurements to determine research with impact:

- the number of times a published article is cited
- the number of awards its authors receive
- testimony before a government or other policy-making body
- changes in business practice
- requests to present papers at important gatherings
- sales numbers of books

Whether their research is published in top journals or adopted outside of academia, the faculty of the Hankamer School of Business will continue to play a fundamental role in the shaping of our business world by producing research with impact.

TERRY S. MANESS
Dean, Hankamer School of Business

PLANNING FOR UNPLANNED PURCHASES

It never fails. Even when you painstakingly make a list before going into the grocery store, something else always finds its way into your shopping cart. Traditionally, those "extra" purchases have been considered things outside of a shopper's budget. But Marketing professor **KIRK WAKEFIELD** discovered that those unplanned purchases are really planned by consumers.

Wakefield and his colleagues at the University of Pittsburgh knew that most shoppers have a mental budget when they walk into a store. They theorized that, even if shoppers have a list, written or in their mind, they also have room in their mental budget for additional non-list items.

"We came up with the term 'in-store slack' to describe the additional money people spend," Wakefield said. "They know they'll spend it, but they have no clue on what."

For their study, Wakefield's team sent researchers into H-E-B stores in and around Waco, Texas. They met shoppers as they entered the store and asked them about their budgets and what they planned to purchase. They recorded the number and brand of items that consumers planned to purchase, then gave them scanners to record the sequence of the items they put into their baskets.

Wakefield found that even though shoppers, on average, purchased far more than they had on their lists, the total amount of money they spent was about what they had anticipated.

For example, if a shopper planned to spend about $60 during that trip, approximately $40 would be spent on items on the list, and around $20 would be spent on items not on the list.

"So, what we found is that in-store slack really is built in to a budget," Wakefield said. "People stay within five percent of their total mental budget."

Generally, there are three reasons people allow themselves in-store slack, Wakefield said. Forgotten items (seeing items in the store that are needed but not on the list), wanted items (impulse purchases) or price-oriented (an item is on sale so the shopper purchases items not on the list, or more of the item than originally planned).

In-store slack items also tend to come from the same categories.

"Slack is usually spent on items for fun, or self-indulgent purchases," Wakefield said.

The categories most often bought with in-store slack were things like candy and gum; ice cream and other frozen desserts; cookies; shelf-stable juices and juice boxes; packaged breads, rolls, bagels and muffins; crackers; baking mixes for cakes, cookies and brownies; ketchup, mustard and other condiments; salad dressing and mayonnaise; and canned fish (such as tuna and sardines).

More necessary items tend to be planned and purchased: pet food, fresh milk, fresh fish and seafood, eggs, soft drinks, laundry detergent, paper goods, bottled water, and fresh baked-goods from the in-store bakery.

Wakefield also found that if shoppers did exceed their in-store slack, it was usually at the end of their shopping trip, and occurred more often if a shopper spent a longer time in the store.

"Those unplanned purchases tend to come at the end of a shopping trip, when shoppers are tired or wanting to reward themselves," he said. "That is when people are more susceptible to going over their in-store slack."

People who shopped most aisles of the store were most likely to go over their in-store slack, while shoppers who shop in three or fewer aisles rarely go over their budget.

Wakefield found that there was little difference in the purchasing habits of men and women. Both were equally likely to stick to their mental budgets, and neither showed a tendency toward more impulse buys.

Income also did little to change how people met or exceeded their mental budgets. It did, however, show a difference in how people used their slack.

"Income levels did show a moderate effect," Wakefield said. "Higher income shoppers tended to stockpile. If they found an item on sale, they purchased more of that item than they originally intended. Lower income shoppers tended to upgrade. For instance, if they had planned to purchase a store brand, but when they got to the store found that the name brand of the same item was on sale, they tended to opt for the name brand."

Wakefield's papers on the findings, "Spending on the Fly: Mental Budgets, Promotions, and Spending Behavior" and "Planning to Make Unplanned Purchases? The Role of Discretionary Budges in In-Store Decision Making," both coauthored by John Jeffrey Inman and Karen M. Stilley, were published in the *Journal of Marketing* and the *Journal of Consumer Research*, respectively. The findings have several implications for retailers.

First, shoppers who save on their planned items, are likely to stockpile things on their list only if their slack has not been used up. If they save on planned items, they are also more likely to exceed their budget with unplanned items only after their slack is depleted. Therefore, retailers may be wise to place items that induce stockpiling (like buy-one-get-one-free promotions)

at the beginning of the shopping pattern, and focus those promotions on items that tend to be planned purchases (like bottled water or laundry detergent). Displays of items that are unplanned might also be placed near the promotional items at the end of the shopping pattern.

Also, since higher income households tend to stockpile planned items before their slack is depleted, while lower income households switch to higher-tier brands, retailers might consider running promotions of high-tier brands that would appeal to higher-income shoppers. Lower-tier brands might consider marketing their product in ways that would encourage lower-income shoppers to think in the long term so that they will stockpile the item.

Wakefield hopes to continue this stream of research, which he has been working on since 1992, to look at other questions.

"It would be interesting for retailers if we could see whether consumers whose slack is spent primarily on 'forgotten needs' are more influenced by promotional savings than those whose slack is spent primarily on 'unplanned wants,'" Wakefield said.

He would also like to look at how non-price marketing features, like the amount of shelf space an item has and how it is displayed, might influence people spending on planned and unplanned purchases.

Wakefield is also curious to see how his findings would translate to grocery stores nationwide, and to non-grocery retailers.

Research from faculty of Baylor's Hankamer School of Business that has reached audiences outside of academia.

HOPE KOCH *Associate Professor, Information Systems*
AND
TIM KAYWORTH *Department Chair and Associate Professor, Information Systems*

Koch's research on enrollment for university Information Systems (IS) programs has impacted not only academia but also the corporate world. Universities have used the research to improve enrollment in their IS programs, and companies like ConocoPhillips, USAA, and McLane Advanced Technologies have applied Koch's findings to refine recruiting practices of graduates. The paper discussing enrollment, "Attracting, Retaining and Placing IS Students in an Economic Downturn" coauthored by C. Van Slyke, J. Wells, R.T. Watson, and R.L. Wilson, was published in *Communications of the Association for Information Systems*, 2010. Koch also served on a panel for discussing placement of IS students at the 15th Annual Americas Conference of Information Systems held in San Francisco, Calif., August 2009.

Koch, with Tim Kayworth, wrote "Partnering with the Majors: A Process Approach to Increasing IS Enrollment, which was published in the *Journal of Information Systems Education*, 2009. Terry Maness, Hankamer School of Business dean, presented Koch's and Kayworth's research at the Southwestern Business Deans' Association Conference held in Santa Fe, N.M., June 2009. The research earned the Bobby G. Bizzell Innovative Achievement Award, which included a cash prize from *BusinessWeek* for continuing the good work of Baylor's IS Career Development Program.

KEVIN KOBELSKY *Associate Professor, Accounting*
AND
MICHAEL A. ROBINSON *Professor, Accounting*

For the past three years, Kobelsky has partnered with *InformationWeek* to analyze company data for research on companies' IT spending. His research was highlighted in the article "From Academia to Action" published in *InformationWeek's* annual *IW500* issue, which focuses on IT investment and IT value.

The article profiled Kobelsky's research findings, which included several papers, one coauthored by Baylor Accounting professor Michael A. Robinson: "The Impact of Outsourcing on Information Technology Spending," which was published in the *International Journal of Accounting Information Systems* in June 2010. Kobelsky's accounting research is of value to business technology leaders—it provides practical insights into how IT delivers business value.

Following the *IW500* publication, Kobelsky was invited to present "Creating Value with IT: Insights and Interviews" as a guest speaker at The Data Center Leaders Summit, Southeast 2010, held in Atlanta, Ga., September 2010. Kobelsky presented his findings on the positive correlation in IT spending and increased corporate earnings and stock price.

BILL REICHENSTEIN *Professor of Finance*
Pat and Thomas R. Powers Chair in Investment Management

Reichenstein's research focuses on withdrawal and investment strategies and approaches to asset allocation. He urges investors to distinguish between pre-and after-tax dollars when calculating asset allocation to get the most from their investments. For example, an after-tax dollar in a Roth IRA is bigger than a pre-tax dollar in a 401(k).

Reichenstein's ideas have generated an impact on the investment services industry. In a survey conducted by The Research Foundation of CFA Institute, 15 percent of surveyed managers now use Reichenstein's suggested investment methods. Retiree Income (retireeinc.com) is currently developing software based on his strategies to help financial planners.

Reichenstein has spoken on investment strategies for numerous organizations including the National Financial Planning Association Conference held in Boston, Mass., October 2010; the AICPA's National CPA Conference held in San Diego, Calif., October 2010; the annual Morningstar Investment Conference held in Chicago, Ill., June 2010; and for Thornburg Investment Management's fall 2010 Retirement Income Webinar Series—over 800 participants registered for the webinar.

RANDAL VAUGHN *Professor, Information Systems*

Vaughn, whose research focuses on cyber security operations, received a grant from ESET LLC, an antivirus and security company with U.S. headquarters in San Diego, Calif. The grant encourages basic research, facilitates an information exchange between industry and academia, and allows academics the opportunity to participate in other industrially-led initiatives.

Vaughn has already generated work from the grant—he has completed a first trial of an open-protocol for antivirus product testing and comparison, and has developed a short overview of the current cybercrime threatscape. Future projects have the potential to involve other departments on campus, with Baylor and ESET researcher collaboration.

Vaughn serves as an organizer for the Internet Security Operations and Intelligence (ISOI) conference, which provides professionals and academics in the security operations community a chance to meet, exchange ideas and communicate about potential and on-going research—ESET participates in the conference as well. Vaughn also serves as general chair of the APWG/IEEE eCrime Researchers Summit, an annual event that brings together academic researchers, security practitioners, and law enforcement to discuss all aspects of electronic crime and ways to combat it.

PEDRO REYES *Associate Professor of Operations Management Director, Center for Excellence in Supply Chain Management*

Reyes' paper "Empirical Evidence of RFID Impacts on Supply Chain Performace," coauthored by John K. Visich, Suhong Li and Basheer Khumawala, was published in the *International Journal of Operations & Production Management,* December 2009. *RFID Journal* then highlighted the research in the article "University Researchers Say RFID's Worth is Proven When Deployed Enterprise-wide." The paper and article have led to a study supported by *DC Velocity.* Reyes and colleagues are investigating key issues firms consider when adopting RFID technology. Analyzing results from a survey administered by *DC Velocity,* they hope to determine the potential of RFID for supply chain innovativeness, the key motivators and barriers for RFID adoption, and how RFID adoption can improve logistics and supply chain performance—the findings will appear in a forthcoming issue of *DC Velocity.*

KATHY HURTT *Assistant Professor, Accounting*

Hurtt's research on professional skepticism is influencing auditing standard setting on a global scale. Hurtt's working paper "Professional Skepticism: A Model with Implications for Research, Practice and Education" was cited in the U.K.'s Auditing Practices Board (APB) white paper "Auditor Skepticism: Raising the Bar." The APB is part of the Financial Reporting Council (FRC), which serves as the U.K.'s organization that sets external auditing standards. Within the U.S., the Center for Audit Quality cited Hurtt's paper, "Development of a Scale to Measure Professional Skepticism" in their recent release, "Deterring and Detecting Financial Reporting Fraud." Hurtt's research focuses on the characteristics and behaviors of professional skepticism.

*Hurtt's research was listed in the spring 2010 issue of Focus as research that would have an industry impact.

PREDICTING THE SURVIVAL AND SUCCESS OF START-UPS

At first glance, the theory seems completely counter-intuitive. But when **STEVEN BRADLEY** started to really look at the question, the answer became surprisingly clear. The assistant professor of Management and Entrepreneurship wondered: how do resources help or hurt new businesses? His hunch was that for start-up businesses, too many resources could hinder more than they helped.

"The idea came from my experiences as an entrepreneur in the '90s," Bradley said.

"I started a small business with very little money during the height of the dot-com bubble."

A friend of Bradley's was working for a publicly traded dot-com business at about the same time.

"His company was burning through money," Bradley said. "He was proud of having one of the most expensive office spaces in Austin and more resources than I could imagine. And I was asking myself how I could very creatively use the little money and resources I had in my business."

When the dot-com bubble busted, Bradley's friend's company went bankrupt, while his survived.

That's when Bradley became interested in the "folding table theory," which suggests that the success or failure of a start-up business could be predicted by visiting the offices. If they have a receptionist and high-priced art on the walls, it predicted failure. But if the business was operating off folding tables, the business would succeed.

Bradley began thinking about those successful "folding table" businesses, like Sysco and eBay.

"I started wondering, could too many resources be a bad thing?" he said. "As it turns out, yes. If you run into problems and you have money, you bring in a consultant. If not, you start working out creative solutions: what can I do to 'duct tape' this problem using the resources I already have? Instead of buying your way out, you have to be creative with your resources, and that is what brings inventiveness, ingenuity and – ultimately – success to a company."

Bradley's research extended to looking at how these businesses performed during the recent economic downturn. He coauthored two articles published in top journals: "Competition,

Resources, and Environmental Change: The Asymmetric Paths of Young Independent and Subsidiary Organizations," *Strategic Management Journal* (coauthors: Howard Aldrich, Dean Shepherd, Johan Wiklund); and "The Importance of Slack for Organizations Facing Tough Environments," *Journal of Management Studies* (coauthors: Dean Shepherd, Johan Wiklund).

Bradley's research showed that start-up companies that were subsidiaries were, in some ways, protected by their parent firm, but that during the economic downturn, independent companies had a better chance to survive.

"Many of the bad independents failed, of course," Bradley said, "but the good ones did better than the subsidiaries, in large part because they were able to find creative ways to face challenges. Those companies that have to figure out how to survive, do the best."

The other finding from the study, which was five years in the making, was evidence of progressive learning by companies.

"We know it's occurring, and we can show that time and experience in the use of even limited resources is a factor," Bradley said. "It's an exciting finding because learning is tough to quantify."

Bradley is now expanding his research to, hopefully, find more effective ways to assist businesses in developing countries.

"Conventional thinking is that the poor in developing countries are waiting for money, and as soon as they have money they can become entrepreneurs," Bradley said. "But we are finding loans through micro-financing are having no effect on the poverty level. In fact, people are using loans to off-set lack of income, like a credit card."

The successful microfinance loans, he said, are those to people who have unique ideas.

"I don't think money is ever the bottom line problem," he said, "Whether in the U.S. or Kenya, it's about good ideas and how to find them."

One solution he is now studying is the idea of micro-franchise versus microfinance.

"The idea is to find a number of low-cost businesses, which already have a business model in place, and provide entrepreneurs in developing countries with the name and training," Bradley said. "We want to see what happens if you introduce a business that's not new to the world, but new to that area of the world."

Bradley and his team are currently collecting data in Burundi, Kenya, Indonesia and the Dominican Republic.

PROFESSORS FORGE NEW WORKPLACE PATHS

In the ideal workplace, all job tasks are fulfilling and all policies fair. No one gripes about the boss. Mutual respect for colleagues fuels office relationships, **TEAMS OPERATE LIKE FUNCTIONAL FAMILIES**, and temporary workers feel embraced by the agencies that send them to work.

In short, work and family not only co-exist peacefully, but each thrives and gives sustenance to the other.

That ideal exists only in theory, but if theory influences reality, the published work of professors at the Hankamer School of Business could be called path forging.

Here are descriptions of their work collaborations published in top journals.

Linking Team Resources To Work – Family Enrichment and Satisfaction, *Journal of Vocational Behavior,* October 2010

Authors: Emily M. Hunter and Dawn Carlson, Baylor; Sara Jansen Perry, University of Houston; Steven A. Smith, University of New Orleans

Teams are more of a workplace norm than a rarity these days, said **EMILY HUNTER**, assistant professor of Management and Entrepreneurship who also teaches negotiating and conflict management to undergraduate students. When considering team research, think "work spouse," because effective office teams resemble a family by providing a support network and creating a balance between work and home lives.

To gain factual insight about teams, Hunter and other researchers used student groups from universities that were involved in multiple team projects throughout the semester.

"We discovered that individuals working on teams who are similar, familiar, and cohesive tend to experience greater enrichment between work and family and are more satisfied with their work and family lives," Hunter said. "Essentially, we demonstrated that teamwork holds the potential to benefit employees and students by providing them with resources to manage conflicts and enrich both their work and family domains."

The research shows the benefits that effective teams provide to individual members, said Hunter, who used a team model when embarking on the project. She contributed the idea, data analyses and the majority of the writing; Perry, with whom Hunter is working on several projects, collected the data using research gleaned from classes that coauthor Smith taught. And Hunter approached Baylor Management professor **DAWN CARLSON** about collaborating because of her knowledge and experience in work-family research. Carlson contributed to the framing and theoretical development of the manuscript.

PROFESSORS FORGE NEW WORKPLACE PATHS cont.

"It helps to know a coauthor's style, preferences, and knowledge base to know how best to use each author's strengths," Hunter said. "My coauthors and I worked very efficiently on this paper. It was a very smooth process." *The Journal of Vocational Behavior* accepted the paper without revisions, a rare occurrence at top-level publications, she noted.

The research is ongoing, said Hunter. "We are doing more with this dataset, particularly a project that investigates student virtual teamwork and personality traits." She and her research team want to know whether people prefer to work in teams and/or virtual teams, and to what extent managers can assign teams based on personality.

She also continues to study the connection between work and family. She, Carlson and Management professor Merideth Ferguson are studying leader-employee relationships; how control impacts work-family conflict; the processes by which work-family enrichment enhances satisfaction; and the health and turnover of working mothers after childbirth. She is also working with Baylor Management professor Cindy Wu on the effects of workday breaks, using Baylor staff members as study subjects.

Managing Temporary Workers by Defining Temporary Work Agency Service Quality, *Human Resource Management*, July-August 2010

Authors: Chung-Tzer Liu, Soochow University, Taiwan; Cindy Wu, Baylor; Chun-Wei Hu, specialist, Cathay Life Insurance Marketing Planning Department

If you think of temporary workers as a life-giving blood transfusion when an organization needs it most, you will understand why agencies that supply the best temporary workers are in high demand. To stay competitive, they have to treat both their clients and their employees – temps – as customers, noted **CINDY WU**, associate professor of Management at the Hankamer School of Business.

She and her coauthors explored the issue of good customer service from a temporary worker's perspective and discovered that temporary workers appreciate reliable placement services, interpersonal support, well-apportioned facilities and good equipment, and service convenience. Attracting and keeping temporary workers happy is easier, the researchers found, if agencies strive for both loyalty and satisfaction.

"Our study suggests that temporary workers' expectations of their agency focus on the function of the service, better interaction with the agency, and service accessibility before, during, and after their job assignments," Wu noted. "In addition to being polite…and keeping promises, agencies should focus on offering professional assistance, such as suitably matching employees with task assignments and client organizations and being

more involved in the performance evaluation process by initiating and maintaining interaction with client organizations." The convenience factor means the agency's services are "available, responsive, and easy to use," Wu added.

Thoughtful management of temps enhances their performance for all organizations, Wu noted, including the temporary agency and organizations using them. "Similarly, our research may apply to on-call employees, who may be allowed to work for multiple employers and therefore may experience higher difficulty establishing loyalty with the employing organization relative to regular employees," Wu noted. Such workers share similarities with temporaries "in that they enjoy greater autonomy in exiting the employment relationship," she said. "Organizations that use such employees may benefit from considering them 'customers' for better management of them."

Wu, who contributed the idea and helped integrate the literature across three disciplines into the theoretical framework, also did most of the writing. Collaboration happens at the highest level when each participant "has a similar understanding of what good research should be, and all collaborators share a common skill set, yet each contributes something unique," she said. "It is also important to know each person's work style."

Her other current projects continue to focus on human resource management that explores ways to retain entrepreneurial talent, and the effects of ethics-specific human resource practices. Her ongoing projects also focus on work-life balance. One project with Hunter (previously mentioned) examines the effects of employee leisure activities and workday breaks on their work performance, and another looks at the detrimental effects of employees' over-commitment to work roles. She is also working on studies of leadership on employee performance and attitudes.

Pay It Forward: The Positive Crossover Effects of Supervisor Work–Family Enrichment, *Journal of Management*, March 2010

Authors: Dawn S. Carlson and Merideth Ferguson, Baylor; K. Michele Kacmar, University of Alabama; Joseph G. Grzywacz, Wake Forest; Dwayne Whitten, Texas A&M

The old picture of the man abused at work who then inflicts abuse on his family is turned on its head in "Pay It Forward." Clearly, supervisors' good experiences at work "trickle down to their subordinate(s) to ultimately improve subordinate performance at work," said **MERIDETH FERGUSON** of the research's premise. "We theorize that a supervisor who experiences enrichment will want to provide subordinates with similar experiences so the supervisor creates a family-friendly environment." That action

heightens work enrichment for the subordinate and leads to better performance.

"What is less clear is the process through which enrichment affects performance," she added. "Our study is one of the first to explore this empirically, and we were particularly interested in how enrichment might trickle down the organizational hierarchy and how factors that the organization can control might influence this process."

Ferguson developed the background and theory for how and why the effects of enrichment might trickle down. Then she outlined the findings, and she and colleagues discussed how they relate to existing research and what managers could learn from the findings. Carlson conceptually developed the project, ran the analyses, and integrated the efforts of each coauthor into a persuasive manuscript.

In doing research with others, a deep understanding of collaborators' strengths is necessary, Ferguson said. "Some of my coauthors are incredible theorists, others are great at methods and advanced statistical analyses, and still others excel at couching the research in the broader picture, highlighting how it contributes to what we already know, or crafting a 'hook' that compels someone to read our work. I tend to look for collaborators who either have interests that overlap with mine or whose interests would blend with mine in an interesting way."

Ferguson, who likes to study how social interactions affect the workplace and beyond, is fascinated by "bad" employee behavior (abusive supervision, employee deviance, incivility) and the work-family interface. Her future studies include a project with Carlson and three others under second review at the *Journal of Occupational Health Psychology*. She also has projects relating to how the experiences of abusive supervision and coworker incivility affect an individual's family life.

TURNING UNFAIR PERCEPTIONS UPSIDE DOWN

Ask **CINDY RIEMENSCHNEIDER** why identity is important for information technology professionals, and she might turn the question around.

"What do you think a doctor's professional identity is?" she asks, and as you struggle for an answer, you might give a physical description that leads you to what a medical doctor does.

Such professional identity – physical description and all – is at the heart of how we assign importance to professionals, said Riemenschneider, an associate professor of Information Systems at the Hankamer School of Business. And if you are likely to think of doctors as white-coated experts dishing out advice, please give similar consideration to the man or woman responsible for the stories you are reading in this very publication. They are the people who inspired and provided the technology that allowed it to happen.

As Riemenschneider puts it: "As a society, we have a concept of what the professional identity is for the medical profession, or for an attorney. But there is not much done for information technology (IT)." And it is this kind of vision that allows people to see themselves working in the IT industry, which is necessary to attract workers of the future.

An outdated and inaccurate perception of an IT expert is someone who makes eye contact only with a computer screen while speaking an unknown dialect of English, and wearing thick glasses and the latest in pocket protector fashion. That old picture sticks in our heads.

But even if that were an accurate stereotype at one time, the IT field has changed dramatically, Riemenschneider noted. The field has broadened because computers are everywhere, beginning with their use in professional offices and their expansion into homes. And there is no sense in saddling the information tech with limited, unfair stereotypes.

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TURNING UNFAIR PERCEPTIONS UPSIDE DOWN cont.

"Understanding what the professional identity is can help us educate the general public," Riemenschneider said.

Such understanding also affects who goes into a profession and why, what kind of training they receive, and eventually, what organizations of all types are able to do with technology – or, conversely, how an inability to find competent employees stifles an organization's productivity and growth.

Riemenschneider researched and co-wrote "IT Professional Identity: Needs, Perceptions, and Belonging," published in May 2010 in the *European Journal of Information Systems (EJIS)* to help bring perception closer to the reality. Lead author of the paper is Nita Brooks of the Department of Computer Information Systems at Middle Tennessee State University, Riemenschneider's former student at the University of Arkansas. Other coauthors are Bill Hardgrave of Auburn University and Anne O'Leary-Kelly of the University of Arkansas.

Another paper published in the *EJIS* examines gender perspectives in the information systems field: "Perspectives on Challenges Facing Women in IS: The Cognitive Gender Gap."

In working on research for this paper, Riemenschneider and her colleagues hoped to gain insight into why many women leave the male-dominated information systems (IS) field. "There have been women in information systems, but the number is definitely declining. We were trying to understand why. This paper used a qualitative approach with men and women, asking them the same questions. We were hoping to shed light on why not everyone sees the issue the same way."

Researchers asked gender-based questions in six focus groups – one made up of men only and one of women-only composition – at three organizations. The researchers conducting the men-only sessions were male, and those conducting the women-only sessions were female.

The resulting paper, coauthored by Margaret F. Reid and Myria W. Allen of the University of Arkansas and Deborah J. Armstrong of Florida State University, shows a gap between male-female perceptions of gender challenges. The researchers believe that understanding the challenges that women in the profession face can promote insight into why there are not more women in the field, and could lead to reversing the trend.

Gender challenges in the IS field range from work and family issues to training to differences in perceiving the nuances of communication, the paper reveals. It points out that "…women's access to senior management positions, where they might be able to articulate and ultimately address the challenges women face in IS, is still confined to a small cadre of women, thus limiting their ability and perceived legitimacy to make demands for lasting change."

The research is important in light of the shortage in this country of information technology workers. Riemenschneider, whose PhD is in Information Systems, earlier wrote a guest editorial in the *EJIS* calling for such research, noting that the Bureau of Labor Statistics predicts a 25.2 percent growth in IT jobs by 2016, against a backdrop of 10.4 percent for all jobs.

"You look at where are the holes in our knowledge with regard to where are the holes in our field, and where can we build on our knowledge," Riemenschneider said. "Over time, these questions have arisen out of my primary research areas."

Issues affecting the IT workforce is an area she will continue to study, encouraged by the atmosphere at Baylor. IT is the first department in the Hankamer School of Business to build a PhD program for Management of Information Systems. A call to help develop the program drew Riemenschneider to Baylor.

One of her latest projects is to examine data collected from state government workers, including CIOs, IT managers and IT workers. She is studying how much knowledge departments can absorb from a variety of environments.

"Over time as a researcher, you find different projects, and some are more fun than others," she noted. "You end up finding areas you are passionate about, and that leads you to work on those projects. The IT workforce is one area where I really developed a passion about trying to answer these questions – 'Why aren't there more women in this field and how can we attract more women to it? What can we do to change negative perceptions?' These are some of the driving questions that led me down this particular path. If you like logical processes and have creativity, this is an excellent field to go into."