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Generational Perceptions of Productive/ Unproductive Information Received from Management through Different Communication Channels

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To the Graduate Council:

I am submitting herewith a dissertation written by Eva Lynn Cowell entitled "Generational Perceptions of Productive/Unproductive Information Received from Management through Different Communication Channels." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Business Administration.

Virginia W. Kuprtiz, Major Professor

We have read this dissertation and recommend its acceptance:

Sharon J. Bartley, John W. Haas, Martha W. Keel

Accepted for the Council:
Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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Carolyn R. Hodges
Vice Provost and Dean of the
Graduate School

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Generational Perceptions of Productive/Unproductive Information Received from Management through Different Communication Channels

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Eva Lynn Cowell
May 2010

DEDICATION

This dissertation is dedicated to the loving memory of my parents

Gaston Reigart and Freddie Ernestine “Tena” Cowell

for raising my sisters and me with the heart and belief that anything you pursue in life is possible. As long as you are passionate, kind to yourself and others, persevere, find joy and laughter in little things, and believe in yourself and God, there are no detractors too great, or obstacles too large to overcome.

Your destiny is what you make it.

Your legacy is in how you pursue it.

I hope I have made them proud.

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Rita Barbee, my business partner, my friend, who carried on in my frequent absences, and never complained. Cindy Baird, whose note cards of encouragement are taped to my monitor so I know to stay the course. I never felt my job was in jeopardy

knowing you support me, love me and want the best for me. I love you both and am so blessed to have you in my life.

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ABSTRACT

This exploratory study identified generational preferences for receiving information from management through different communication channels and determined if age predicted productivity for productive and unproductive information received through different communication channels. This is the first study to empirically examine the relationship between age cohorts, communication channel preferences, information categories, and productivity. Sample participants worked as Extension agents at a major land-grant university. The four generations represented in the sample utilized multiple communication channels and were geographically dispersed throughout the state. The survey was administered electronically and completed by 204 (74%) of the eligible 275 employees in the organization. Independent Samples *t*-tests, General Linear Modeling, ANOVA's, means analysis and linear regressions were employed to analyze the data to test the hypotheses.

Regarding channel preference, the findings determined that face-to-face communication was preferred by both generations for receiving private and confidential information and for training. Media was preferred by both generations for routine and procedural and time-sensitive information. Lastly, the analysis revealed that written documents were the preferred method of both generational cohorts for compensation and benefits. Regarding productivity, the findings determined that age predicted a perceived increase in productivity tasks for production information received face-to-face from management, but did not predict a perceived increase in productivity tasks for the other communication channels. Both generational cohorts perceived productive

information received face-to-face from management to increase morale and decrease stress. The cohorts, however, differed on the increase of trust as a result of receiving productive information face-to-face. Both generational cohorts perceived unproductive information received from management through all communication channels to negatively impact productivity tasks. Finally, both cohorts perceived unproductive information received face-to-face from management to negatively impact morale, trust and stress.

Empirical examination of generational workforce issues is relatively new to Human Resources and research is needed to further examine generational perceptions. The study begins to open dialogue that the supposed differences inherent in the multigenerational workforce are not as much a factor of the generation as the information. The development of the new instrument in this study provides a new tool to examine organizations preferences and productivity.

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DEFINITIONS

The following words are defined as they are used in this dissertation.

Generational Cohorts

Traditionalists are those born from 1901-1945.

Baby Boomers are those born from 1946-1964.

Generation X are those born from 1965-1980.

Millennials are those born from 1980-present.

Productivity

Productive defined in this dissertation means one or more of the following: producing; completing a job or task in a productive manner; to move forward; doing your job in a competent, efficient and accurate manner; to effectively use time and resources that are available to complete a desired task in the shortest time possible; to do quality work in a timely manner; generating work in a successful and timely way; and completing a task in an efficient amount of time.

Unproductive defined in this dissertation means one or more of the following: waste of time; not relevant to my job; does not add anything to my job; of no value to my job; and does not make my job more productive or effective.

Communication Theories

Media Richness Theory (MRT) (Daft, Lengel & Trevino, 1987) richness of communication channels (media) are defined by 4 different criteria: 1. Feedback: instant

feedback allows questions to be asked and corrections to be made. 2. Multiple cues: an array of cues may be part of the message, including physical presence, voice inflection, body gestures, words, numbers and graphic symbols. 3. Language variety: the range of meaning that can be conveyed with language symbols. 4. Personal focus: a message will be conveyed more fully when personal feelings and emotions infuse the communication. (Daft, Lengel & Trevino, 1987, p. 358).

Social Presence Theory (SPT) (Short, Williams, & Christie, 1976) (as cited in Ramirez & Zhang, 2007, p. 290 wrote that "a central component of online interaction is the extent to which one's partner is perceived as salient by a communicator…this degree of salience experienced or 'social presence' is a function of the number of cue systems available in a given medium."

Interactional Justice Theory (IJT) (Bies & Moag,1986) Interactional justice is comprised of two components: informational justice and interpersonal justice. An example of informational justice is when a "recipient of a negative outcome often asks 'Why?' or 'Why me?' The adequacy with which the organization addresses this need for an explanation is informational justice.

Communication Channels

Face-to-Face

Telephone

Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)

Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)

Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)

Information Categories

Private and Confidential (including evaluations, performance reviews) Routine and Procedural (Standard Operating Procedures)

Time-sensitive (emergency situations, tasks with immediate urgency, tasks with shortened deadlines)

Routine and Procedural (Standard Operating Procedures)

Training (initial on-the-job training, subsequent training, workshops, modules and orientation)

Compensation and Benefits (plan selection, changes in compensation and benefits packages, new offerings)

CHAPTER I: INTRODUCTION

Two phenomena are occurring simultaneously in organizations today that challenge not only Human Resources but the organization itself. For the first time in history, many organizations are navigating the challenges of up to four generations working together while at the same time dealing with communication technology that is advancing faster than most organizations can effectively handle. The focus of the research is to begin to examine and understand generational cohorts at work. It also examines the changing channels of communication within organizations.

As early as 1990 Dychtwald and Flower heralded the coming of an aging workforce and how it would affect society and the architecture of business in their book *Age Wave.* Studies and findings by AARP and Hale in *The Older Worker: Effective Management Strategies for Human Resource Development* (1990) also touted the older worker in the workforce and laid the groundwork for how life, work and business would change forever. In the intervening 18 years, the challenges have become greater as another generation has entered the workforce. "In the current labor market, the Traditional generation is delaying retirement (or returning to work), Baby Boomers are beginning to retire, Generation Xers have realigned their work/family priorities and Generation Y (Millennials) are entering the workforce with distinctly different demands of their employers than those of previous generations" (Paul, 2008, p. 1).

Zemke, Raines & Filipczak (2000) began their book *Generations at Work: Managing the Clash of Veterans, Boomers, Xers and Nexters in your Workplace* with an ominous tone:

> The workplace you and we inhabit today is awash with the conflicting voices and views of the most age- and value-diverse workforce this country has known since our great-great-great grandparents abandoned the field and farm for factory and office. At no previous time in history have so many and such different generations with such diversity been asked to work together shoulder to shoulder, side by side, cubicle to cubicle (p. 9-10).

Just as the Industrial Age shifted societies from an agrarian and pastoral way of life to factories, mass production and city expansion, technology has decreased the size of the world. Technology has not only changed society, it has changed organizational structure and the way workers do their jobs. The occupational structure of this knowledge-based economy has shifted to white-collar services in office jobs. “Marketers, lawyers, editors, accountants, salespeople, and others now account for 53 million, or 41%, of the American Economy’s 133 million jobs” (Carnevale & Desrochers, 1999, p. 32). Technology, specifically internet capability, “is not just about all the commerce we can do, but about how we can change community to enable people to better meet their needs and thrive. . . . It is more important to a town than new roads or bridges” (Canton, 1999, p. 50). Electronic channels *are* the new roads and bridges.

HR Focus (2007) noted that utilizing technology for Human Capital Management (HCM) has increasing adoption rates of various technologies. Applications for administration are at a worldwide adoption rate of 89% — that includes all industries. In addition, utilizing technology for employee productivity (49%) outperforms technologies to increase management productivity (46%) by 3%.

The Internet is not the only technological marvel to stimulate change in organizational structure, but it facilitates many of the advancements in communication technology. Three areas of organizational structure are most affected by technology: 1) the ability to participate in real time with no distant boundaries, e.g. presence technology such as IM'ing, the first application to "really take off" (Turek, 2004, p. 40). 2) the ability for employees to '"telework" from home, from a satellite office, with on-the-go mobility, or with a telecommute (Lee, Shin, & Higa, 2007, p. 687). Turek (2004) also notes that 87% of American employees work away from headquarters (p. 40). And 3) it has bottom-line impact on productivity and overhead. Kosinski (2007) lists many companies that take advantage of these flexible schedules. With the mantra "work is something you do. It's not the place you go to," Jason Dehne and others at "Best Buy Corporate are out of their office 70% of the time. The company has invented a system called ROWE—Results-Only-Work-Environment—in which they go to the office only when they want to. The end result—how much you get done—is all that matters." Best Buy reports that corporate productivity has increased 35%.

Sun Microsystems “saved $400 million in real estate costs by allowing nearly half of all employees to work anywhere they want. And at IBM, on any given day 42% of the global workforce does not go to the workplace” (pg. 1) All of this is made possible by technological advances and forward-thinking organizations that push for genuine productivity from their employees in exchange for freedom.

One concern in the virtual work world and the management of people is that “you do need to be careful: people management is about interaction and conversation: technology should not de-humanize that interaction or you will drift away” (Bland, 2005, p.63). However, the use of I-chats, teleconferencing, IM-ing, texting, and many other forms of communication technology allow one to be aware of another person. Social presence is being redefined. It also important to note that the advances in technology have taken organizations to new levels of multi-tasking. Reinsch, Turner, & Tinsley (2008) have defined the new practice of “multicommunicating— engaging in two or more overlapping, synchronous conversations” (p. 391). They have illustrated both the efficiencies and inefficiencies that communication technology can have on an organization:

> Scenario 1: At five o’clock in the afternoon (local time) a crew drilling for oil in Indonesia encounters a problem. The field engineer contacts a 24 hour a day technology center in Texas (local time, four o’clock in the morning). The engineer in Texas--with access to multiple communication technologies--interacts with two other

> engineers while responding to queries from Indonesia. Within forty-five minutes the engineer in Texas has worked out a solution and communicated it to the crew in Indonesia (Amin et al., 2001). The company estimates that such practices save the company more than $200 million per year (Smith et al. 2001).
>
> Scenario 2: While supervising employees and receiving occasional calls from friends, a manager, Trina, has to respond to complex questions from executives engaged in legally binding negotiations. "What commonly happens for me [is] take the conversation [and] while I'm on the telephone…[also send a chat message to] somebody at the same time. So you have like three things going at once. In some cases…[I lose track] of what the person on the phone is saying and they can be irritated…[because] they have to repeat themselves." Trina added that a mistake "could be very detrimental." (We interviewed Trina and several other experienced multicommunicators during the preparation of this paper). (Reinsch et al, p. 391)

These scenarios act as both a cautionary tale for correct and productive use of communication technology as well as an example of how efficient and vital these advancements have become to organizations.

The trend now is to not only accept and acknowledge the differences that these generational cohorts bring to the table, but begin to search for

commonalities to calibrate the working environment and pull the generations to a place of parity. Jennifer Deal's *Retiring the Generation Gap* (2007) is a project of the Center for Creative Leadership that collected data from 2000-2005 to find common ground in the workplace for these generational cohorts: "The research shows that generations' values do not differ significantly—individuals of all generations differ much more from each other than any generation does from the others" (p. 27). Bell and Berry (2007) noted, "Age is a major diversity concern, yet being the same age does not negate any other potential differences" (p. 23). Deal (2007) concludes, "You have to accept generational conflict as an inevitable part of work and deal with it" (p. 211).

Generational conflict at work has authors and experts filling the bookshelves with strategies to help combat and cope with these issues. Straus & Howe (1991), in their seminal book, *Generations*, demonstrated the cyclical nature of what is known as 'generational conflict.' What we see as something new is a cycle that has repeated itself before, is repeating now, and undoubtedly will repeat itself in the future. Strauss and Howe state, "The generational cycle shows a powerful recurring rhythm—and, with it, a powerful two-way relationship with history" (p. 107). Strauss and Howe's (1991) extensive research on American history has formulated that there is a relationship between social movements (cycles) and cohort groups:

> Both types of dominant generations occupy roughly the same lifecycle stage when movements begin. One is partway into rising adulthood, still

> straddling its coming-of-age "rite of passage." The other is partway into elderhood, still exercising its final leadership role before the ebb of old age…as we would expect the two types of dominant generations (Idealist and Civic) have exactly the opposite phase-of-life relationships with the two types of social movements (p. 107).

The relationship between generational cohorts, who are living through their own life cycles, elicits this clash. This is nothing new as evidenced by and documented in history. However, we are in a unique time in that life spans are increasing and many older workers need to continue working for financial reasons. It is true that there has always been generational conflict, but the arena has moved to the workplace, which is what makes the challenges seem new.

Even more challenging is the evolution of communication technology. It has redefined not only the channels of workplace communication but overall workplace structures and organizational design: "The speed of development and spread of advanced information technology is for many organizations *the* issue to consider" (Furnham, 2005, p. 657). These advances run the gamut from internal and external communication, teleconferencing, virtual teams, telecommuting (teleworking), 24/7 connectivity to jobs, and work/life balance issues to name just a few.

How are organizations to cope with the plethora of change and options available to them? Human Resource (HR) professionals have the responsibility

to assess current communication channels and the efficiency of their workforce. This entails examining both phenomena at the same time.

The purpose of this study is threefold: First, to identify the attributes of the generations that now co-exist in the workplace. Second, to recognize how communication processes and channels have changed in the recent past as well as the predicted changes for the future. Third, to discuss HR implications these variables have on the functioning of an organization in regards to job or organizational structure and information dissemination.

The study will define cohort groups by age and will discuss their main attributes, describe the main challenges organizations are tackling in managing these diverse groups, and identify characteristics that the four groups share in common relating to work, communication, information and interaction issues that will make them most efficient and productive.

Research Questions

This study arrives at two main research questions.

1. In what ways does age affect generational perceptions of communication from management in today's workforce?
2. What are the generational perceptions of productive/unproductive information dissemination in communication processes?

The challenge of the research is to unravel generational stereotypes of behavior. The research seeks to establish common ground between the cohorts in a work

environment with the emphasis less on conflict, inflexibility, and more on common communication channels.

CHAPTER II: Literature Review

Defining American Generational Cohort Groups for White-Collar Office Workers

A search of the U.S. Census Bureau, U.S. Department of Labor and the Gallup Organization do not identify or define “governmentally regulated” time spans for generations. They are called “generations” but there is no consensus of birth years attributed to each

For example, generations tend to be 10-18 years in length and the various descriptions of the different generations are defined more by social norms and world events than a mathematical logarithm set by a bureau. There is also variance in descriptors by authors, which prompts the thought that perhaps their categorization may be the result of a convenient sample for their study, they are trying to make a point based on world events or the environment, or they just want to be politically correct and not offend those on the cusp between generations. Martin and Tulgan (2001) have reduced the time span of each generation, whereas, Zemke et al (2000) actually overlap birth years and generations.

Humans like to categorize, as fair or unfair as it is. Regardless of individuality, generations are classified within a cohort group. The world certainly shapes generalized behavior between the generational categorizations. This

Table 1 Generational Cohort Groups

Generation	Traditionalists	Baby Boomers	Generation X	Millennials
Years Born	1901-1945	1946-1964	1965-1980	1980-present
# of Births*	75 M	80M	46M	76M

*Source: Eisner (2005)

study uses the terms Traditionalists (over age 60), Baby Boomers (42-60), Generation X (26-41) and Millennials (25 and under) (White, 2006). For the purpose of this present study, Table 1 illustrates the generational cohort groups and their number of births.

Traditionalists

Traditionalists have also been known as Generation A, Veterans, the Silent Generation and "The Greatest Generation" (Brokaw, 1998). The major events in their lives are the Great Depression, World Wars I and II, and the Korean War. Their lives have been hard and they have had to work hard to survive. They are loyal and dedicated (Hale, 1990). They have lived by personal sacrifice. They have seen change from a very agrarian way of life to life moving at the speed of light. Imagine the technological advances alone that they have seen (Gravett & Throckmorton, 2007). Their values are characterized as God, family and country. They learned to fight for what was right, and protect and serve. They have seen more wars than any subsequent generation (Zemke et al. 2000). They are proud of themselves, their contributions and their country (Lancaster & Stillman, 2002). They feel they were able to give the "American Dream" as they saw it to the world. They believe in this; they believe in sacrifice.

They believe in delaying gratification, fulfilling duty before pleasure, and considering the common good (Raines, 2003). They are heroic and patriotic.

Baby Boomers

The largest generation in our history, this generational cohort has been known as Hippies, Yuppies and now *Newsweek* says the "Abbies" are here: aging baby boomers (Adler, 2005). They are an optimistic lot who have been told that they can do anything. Seminal events for Baby Boomers include the rise of T.V. and suburbia, the Vietnam War, the Civil Rights movement, the Women's Liberation movement, the Cuban Missile Crisis, free love and the Peace Corps (Hicks & Hicks, 1999). This cohort knew they would change the world. They are great team players, but at the same time their sheer numbers make them the most competitive in history (Lancaster & Stillman, 2002).

They work very hard for what they want, and there is no intention to sacrifice like the generation before them. They are into self-gratification and appreciate material possessions (Gravett & Throckmorton, 2007). Adler (2005) touted in his *Newsweek* cover article "Turning 60" that "the generation who vowed never to get old is about to hit a milestone" (p. 1). Health, wealth, fun, wellness, youth and activism are core values. Look at the current Ameriprise® ad about Boomers' retirement: they are refining what retirement means and are proud of it (Bernstein, 2006).

Oddly, there is a dichotomy within the Boomer generation: early versus late Boomers. The early Boomers are the poster children for action, hard work, extravagances, and success, where late Boomers are more laid back and find early Boomers materialistic (Zemke et al., 2000). Late Boomers are in search of greater work/life balance.

Generation X

What to think of this poor, oft maligned generational middle child? Thanks to Canadian writer Douglas Coupland (1991) they are called Generation X, a term taken from his book which tried to define a generation as the "defied definition." It shows the namelessness of a generation that was coming into its own essence under the huge and overwhelming shadow of the Boomers (Wikipedia). Events shaping Generation X's lives include prosperity, Watergate and AIDS (Hicks & Hicks, 1999). They have also been known as Slackers (Felt, 2005).

This is the smallest of our cohort groups. They were the first generation to be known as "latchkey" kids, as they were the first cohort to be hit with record number of divorces of their parents (Martin & Tulgan, 2002). They had to learn to be self-reliant at a very early age-due to single-working-parent households as well as being the offspring of workaholics (Zemke et al., 2000). This cohort had time to develop technical skills, but so much time alone has also caused social skills to be inhibited (Eisner, 2005). In addition, they have seen the hard work of their parents rewarded with layoffs and downsizing (Lancaster & Stillman, 2002). They are distrustful and unimpressed with authority figures mainly because they

have had absentee authority or view it as a negative (Gravett & Throckmorton, 2007).

This cohort has an entrepreneurial spirit and values autonomy, but it is also important for them to find balance in their lives (Martin & Tulgan, 2002). They love to live on the edge and have fun, but they also value learning (Eisner, 2005; SHRM, 2004). They were the first cohort to develop multitasking.

Millennials

Millennials are the most technologically advanced, educated and culturally and ethnically diverse cohort in our history (Martin & Tulgan, 2001). Their numbers rival the Boomers. They have also been known as Generation Y and Echo Boomers. Critical incidents shaping the attributes and characteristics of this cohort group are school violence (Columbine), the Oklahoma City bombing, the terror of 9/11 and corporate scandal (Hicks & Hicks, 1999). Yet even through this, they remain hopeful. These events also give rise to core values similar to traditionalists: patriotism (fighting for what you believe in), love of home and family, heroes, moralities, doing what is right (Raines, 2003). They are growing up in one of the most affluent times in history, but one with a questionable economic future.

This cohort has been told that they can achieve whatever they want to achieve now, that they should stay connected 24/7, and that whatever they want, they can get it. Millennials live in an on-demand digital world—they have access

Table 2 Generational Cohort Characteristics and Attributes

	Traditionalists	Baby Boomers	Generation X	Millennials
Outlook	Practical	Optimistic	Skeptical	Hopeful
Work Ethic	Dedicated	Driven	Balanced	Ambitious
View of Authority	Respectful	Love/Hate	Unimpressed	Polite
Relationships	Self-sacrifice	Self-gratification	Reluctant to Commit	Loyal
Leadership by:	Hierarchical	Consensus	Competence	Achievers
Perspective	Civic	Team	Self	Civic

Source: Raines, 2003.

to anything they want immediately. They are also always in on family decisions so they expect organizations to ask for their input as well. They are master multi-taskers: a recent survey showed that they consume 31 hours of media—all types—within a given 24 hours period (Tulgan, 2003).

This is also a socially conscious cohort; they understand their place globally and the effect their actions have on the world (Zemke at al., 2000). They have a collective spirit. It is crucial for Millennials to have meaning in their lives (Huntley, 2006).

By way of an overview, Table 2 represents taxonomy of generational cohort characteristics identified in the literature.

Generational Challenges in the Workplace

One of the most critical challenges that organizations are facing in light of the generational population is a disproportionate amount of workers exiting the workforce versus those entering the workforce. “By 2010, retirement could possibly leave a gap of 10 million workers in the labor force” (Hoenig, 2005, p.1).

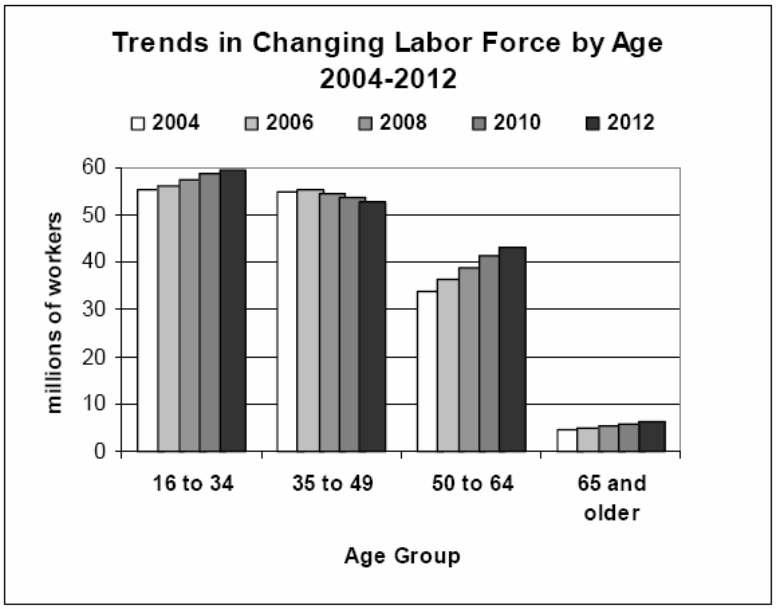

Figure 1 "The Bureau of Labor Statistics projected labor force 2004-20012. Due mainly to the decrease in fertility rate, the age 35-49 cohort drops in size. The age 50-64 and 65 and older cohorts grow as mature workers stay healthier and remain in the workforce. [BLS, 2003-2012]" (Hoenig, 2005, p. 3)

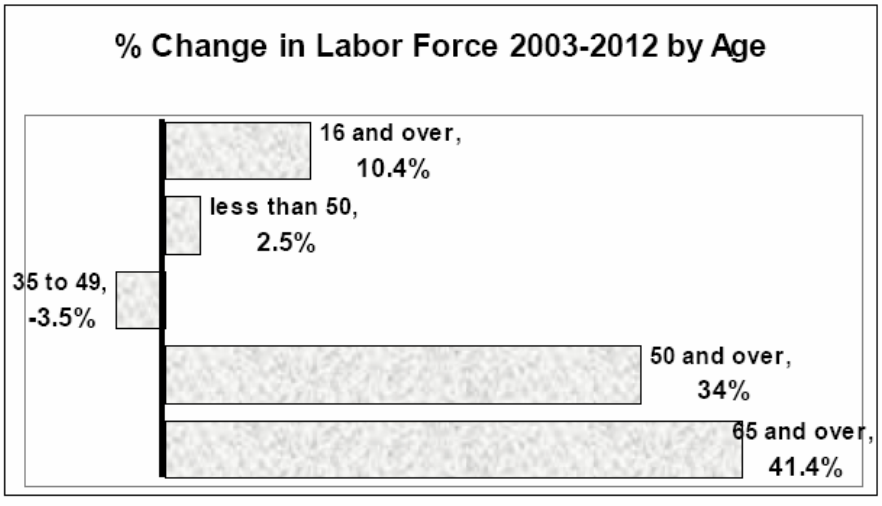

Figure 2 "Percent change of various age groups in the labor force between 2003 and 2012. The less than 50 cohort increases by only 2.5%, while the 50 and over cohort increase by 34%, with the 35-49 cohort decreasing by 3.5%. [BLS 2003-2012]" (Hoenig, 2005, p.3).

Figure 1 illustrates the overall effect of the generational makeup on the future of the US workforce. Figure 2 illustrates the percentage of change by generational cohorts. The graphs in figures 1 and 2 illuminate the direct effect of the workforce flow, but do not account for other real or perceived challenges of these generational cohorts at work.

Traditionalists

Some researchers have found that members of this cohort past retirement age do not want to work; however this is not necessarily the case as “many older workers would like to resume work or continue to work, but they want to do so on their own terms” (Fernandez, 1991, p. 221). Some Traditionalists have to work to survive; some want to remain active and vital. As Hale has pointed out, traditionalists are hardworking, loyal and dedicated (1990). They come from the school of information dissemination on a ”need to know basis” (Eisner, 2005). When put in charge they take command; they are used to formal work environments and a hierarchical system of management (Martin & Tulgan, 2002). They are looking for new adventures and want to learn (Deal, 2007). Some challenges this cohort presents are their reluctance to “buck the system.” They are so respectful of authority they will do as directed (Bower & Fidler, 1994), even if they don’t agree. They may not be comfortable with technology, but are willing to learn (Dychtwald, Erickson, & Morrison, 2006).

Traditionalists are fond of history, so informing them on the history of the organization and the department will aid in their overall understanding (Raines,

2003). Another challenge organizations face with this cohort is their very traditional value system that is steeped in gender expectation (even Rosie the Riveter went back to the kitchen when the men came home) and upper management were always senior members of the team—so these are potential challenges (Hicks & Hicks, 1999). As they are a dedicated and loyal cohort group it is important to speak to them in terms of longevity and not short time spans (SHRM, 2004).

Baby Boomers

This generation lives to work and wants all the accolades that come with that dedication. One of the greatest challenge Boomers present to organizations is they do not want to leave the workforce. Gravett and Throckmorton report “a recent AARP study found that 84% of workers in the Boomer generation would work even if they had no financial reason to” (p. 81). They do not want forced retirement. Training is also an issue as Boomers find renewal in second and third careers. Many industry and business executives are putting their knowledge and skills into new careers as late-life career choices—a practice known as “recareering” (Stevens-Hoffman, 2005).

Boomers want and expect to be in on decisions; they feel they invented the consensus style of management so they demand it (Zemke et al, 2000). This can also be a point of consternation at work. It is said sometimes Boomers do not “walk the talk.” Boomers in management may solicit input through brainstorming, but when decisions must be made, they often revert back to the “command and

control" the umbrella under which they were raised under. This dichotomy can cause mistrust and ambivalence in the work environment (Raines, 2003). "They do not delegate authority to anyone easily, track record or no, and they want to be asked their opinions and see results" (Bower & Fidler, 1994, p. L-32).

Boomers do not take criticism well; therefore coaching and mentoring can be an issue. They value the drive for education so they may come across as know-it-alls in the workplace (Zemke at al, 2000). It is important to remember that this cohort is responsible for the majority of policies, procedures, rules and regulations in all organizations today (Lancaster & Stillman, 2002).

Generation X

What challenges does Generation X bring to the workplace? As Muetzel put it, "they're not aloof, they're Gen X" (2003). It is important to know if an Xer is not looking at you when you speak to them that doesn't mean they are not listening—just multitasking.

One of the most critical things for organizations to know about Generation X is this is the first generation that does ***not*** live for work (Felt, 2005). They are interested in striking a balance between work and life. They also believe the key to work is not working harder and longer, but rather smarter. They believe in keeping their skills up to date. They prefer evaluation of performance based on output rather than effort (Bower & Fidler, 1994). This is a cohort who has seen how their parents were often not rewarded for hard work, which brings in a level

of distrust of organizations; therefore, Gen Xers do not feel loyalty toward companies like past cohorts have felt (Martin & Tulgan, 2002).

These last two concerns can cause an even greater challenge for organizations today: Xers want to keep their skills up, and employers want to develop their employees' potential. But, once the lack of company loyalty is considered, a company that develops their employees may run the risk that these workers will take their skills elsewhere. (Eisner, 2005). However, Xers in the workforce are creative, they think outside the box, they can be constructively criticized, and they can work unsupervised (Lancaster & Stillman, 2002).

Millennials

Youthful exuberance is not all that Millennials bring to work. They are street smart and formally educated. They have a polite respect for those in authority (Eisner, 2005). They are challenged. They want everything fast-paced and challenging. Technology is important to them (SHRM, 2004). They also do not want to have to work for promotions. They do not want to do menial tasks. As Lancaster and Stillman characterized it: Traditionalists mowed yards for summer money, Baby Boomers babysat, Generation Xers worked retail, and Millennials are making $35 an hour to design websites for organizations while still in high school (2002).

They have been groomed to appreciate mentoring, but an organization must be mindful of the cohort group of their mentor. The Millennials' resistance to "paying dues" is a huge source of contention between Xers and Millennials. This

is Gen “WHY”—they ask a lot of questions, not to annoy, but for their desire to know. Their world is one of immediate gratification, and by asking questions they do not have to discover the answer: it is given to them (Morgan, 2005).

The key to Millennials is they want what they want, and they want it now. They are used to getting their way. They have a specific idea about what work should be like and expect reality to conform to that idea (Martin & Tulgan, 2001). If the reality does not, one can expect them to go to the organization and attempt to have it changed (Morgan, 2005). As was said earlier, Millennials are used to being an integral part of the decision making process; they have been doing this within the family their whole lives (Lancaster & Stillman, 2002). As an advantage for the organization, however, Millennials have a social awareness that makes them not only consider what is good for them, but for the whole (Hicks & Hicks, 1999).

As Millennials move into leadership positions, it will be interesting to see how the underpinnings of their education, tolerance, social conscience and diversity positively impact organizations going forward.

Generational Challenges across the Board: The Communication Dilemma of American White-Collar Workers

It is evident that scholars as well as practitioners are focusing on the challenges that lie within a cross-generational workforce. What is now coming forth in the literature is the fact that the generational similarities are just as prevalent; the key

difference is the way in which the generational cohorts communicate. Riley, Johnson and Foner as well as Ryder (as cited in Zenger and Lawrence, 1989) state the case "that age influences communication because the more similar people are in age, the more likely they are to hold similar attitudes, interests and beliefs, and thus the more likely they are to communicate with one another" (p. 361). Wildrick (2006) suggests that building relationships and providing feedback are two ways to build strong personal bonds, thus reducing the potential of miscommunication. Paul (2008) suggests that understanding communication channels preferred by a generational cohort is the best way to engage them in communication.

Leadership for the Front Lines (2002) succinctly summed up the generational communication issue: "The language of another generation can be foreign to you. What you think you're saying and what they think they're hearing may be poles apart. Make sure the translation is accurate. And be careful of *how* you say it." This holds true whether you are speaking with a cohort of the same or a different generation. Having a shared language in the workplace is very important. The journal also notes that sensitivity (of others) and inclusion (of everyone) are also keys to successful communication across the ages. Bower and Fidler (1994) provide an example of this. They believe that when generational differences occur in the decision making process:

> Knowing that those differences produce characteristic responses, a skilled facilitator can engage the group in discussing its differences and the

> implications of varying value decisions. By doing so, the group can move toward consensus based more on what its members share than what they differ. (p. L-34)

Beaver and Hutchings (2005) also suggest the use of team building exercises, and cross generational mentoring (bi-directional) as ways to increase the effectiveness and productivity of an age-diverse workforce.

Communication Channels and its Impact on Organizational Communication and Structure

Communication is one of the most vital tools at the disposal of organizations. Some organizations decide to use communication in an effective manner while others do not make informed decisions and simply participate in non-productive discourse. This section concludes with a discussion of Media Richness Theory (MRT) (Daft & Lengel, 1986), Social Presence Theory (Short, Williams & Christie, 1976) and Organizational Justice, specifically Interactional Justice (Bies & Moag, 1986), and their role in overall communication design. In particular, this section targets MRT as communication technology and virtual work worlds challenge the most richly defined medium—face-to-face.

Information dissemination is defined in this present study as the relay of spreading knowledge (Clampitt, 2005). Communication processes are defined as the way in which knowledge is delivered, in terms of channel or medium (Clampitt, 2005).

Communication Channels

> Media choice is not the simple, intuitively obvious process it may appear to be at first glance. Appropriate media choice can make the difference between effective and ineffective communication, and media choice mistakes can seriously impede successful communication-in some cases with disastrous consequences. (Trevino et al., as cited in Clampitt, 2005).

Whether one chooses to call them channels or media, these are the delivery methods of the message or communication. It is very clear in the literature that technology and the development of the Internet and Intranet have made the greatest impact on the landscape of communication channels (Brock, Kai-Uwe, & Zhou, 2005; de Vries, van den Hoof, & de Ridder, 2006; Goman, 2004; Holtz, 2006; Melcrum Publishing, 2005; Oliver & Green, 2004; Sinickas, 2002; Speculand, 2006).

The choice of communication channels used by an organization is often dependent on “technology, customer and workforce characteristics, diversity and expectations and globalization of labor and customer markets, economies and information” (Axely, 2000, p. 18). Strategic Communications Management recently posed a question to their Communicators’ Network about network trends likely to influence the field of corporate communication over the next 10 years:

> Rosie Halfhead, of Dragon stated, “one big trend that is bound to continue to influence communication is of course technology. Who’d have predicted blogs, wikis and RSS even five years ago? They way people communicate

now is heavily influenced by types of technologies available, which are quite simply re-creating the communication landscape. I think this is exciting as it will help to democratize business communication and finally get us away from the traditional top-down models of cascade and control."

Bob Crawshaw, Main Street Marketing—"in the next five to ten years, internal communication will shoot past the pack to become a PR discipline in its own right. Bosses will take formal and mandatory training in staff communications on university, MBA and other courses."

Jeff Banks, First Data International—"I think the tool we have to provide is creating a bulletin at corporate level that can be expanded by my regional counterparts and the local managers interpret—not just read—the bullet points and explain how their departmental activities support the big picture. Making sure managers don't just stick the bulletin on a notice board is essential. I've also started talking to the HR director about adding competencies in communication to managers' performance appraisals." (Melcrum Publishing, 2006, p. 10-11).

Shel Holtz (2006) points out that organizational communication formerly was a top-down, one-way channel, with only those in authority having the resources to not only produce but also disseminate information. The Internet has opened up these resources to everyone and even though technology sometimes

acts as a barrier, it has also allowed connected people to collaborate. Holtz posits that trends that begin on the internet often wind up on intranets. Citing that those practices that one commonly uses outside of work will also function well in the workplace, the example he gives is instant messages. What was once viewed as a way for “school children to waste time” has now become an integrated part of the workday for employees at companies such as IBM and Raytheon.

Brock and Zhou (2005) suggest scale development and validation for organizational use of the internet to demonstrate the impact of the internet on organizations. The internet plays two critical roles in an organization: Information pull (active and passive) and Information push (active and passive). Brock and Zhou define information pull as “organizational or individual activities related to synchronously or asynchronously pulling information from the internet, by either reading messages on newsgroups or LISTSERVS (mailing lists), retrieving information from databases on telnet, gopher or www or by browsing through web pages and its content” (p. 69). The researchers define active information pull as searching or browsing, while passive pull is subscribing to mailing lists.

Information push refers to “organizational or individual activities related to pushing information into the internet, by either sending non-personalized messages to newsgroups or listservs (mailing lists) or by setting up a corporate web site, pushing its content on to the internet” (Brock & Zhou, 2005, p. 69). Active information pushing “refers to organizations actively marketing its

information push activities" (Brock & Zhou, 2005, p. 69). This activity is creating links from other web sites or registering the web site on search engines. Passive information push simply means that an organization sets up a website, but does not promote it.

Sinickas (2002) agrees with Trevino, Daft and Lengel (1990) in that "choosing the right mix of channels for a specific combination of message delivery and audience is a process that needs to combine the professional expertise of a communicator with audience research" (p. 10). Heretofore, the emphasis of research has been the effect of technology changing the channels of communication, not necessarily the combination of channel selection for message delivery or audience. Not all organizations have the same needs. Some are single unit entities whereas other organizations run globally or from multiple sites. All organizations, regardless of size, may rely heavily on technological channels. In researching management communication and its relationship with high performance from employees, Whitworth and Riccomini (2005) note that "many companies are relying on electronic forms of employee communication, but in doing so they often eliminate the most credible channel one-to-one communication" (p. 19).

Non-electronic communication channels are still utilized by organizations. Sources for information (some perhaps more credible than others) include: bulletin boards, informational notebook libraries, grapevines, group meetings, one-on-one meetings, coworker interaction, supervisor/subordinates interaction,

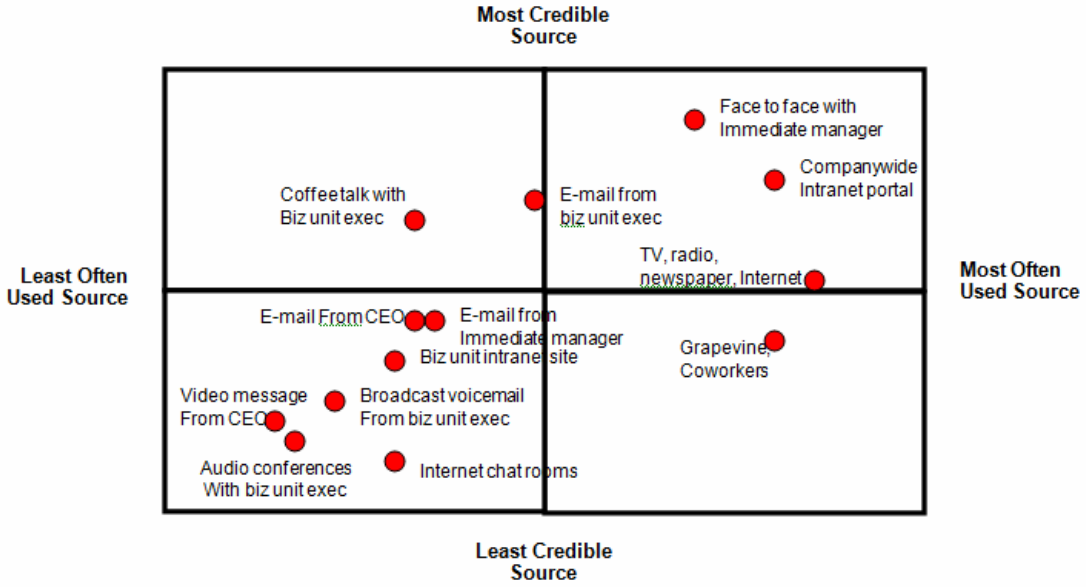

Figure 3 Employees seek multiple channels of communication to find information that they deem the most credible. (Whitworth & Riccomini, 2005, p. 22).

conference calls, trade magazines, newsletters, and professional organizations to name a few. Figure 3 illustrates the results of the Whitworth and Riccomini study of employee-sought channels of communication and their credibility on the continuum.

The research discovered that employees' two most preferred channels for credible communication are their immediate manager and the company intranet, but the most used were outside sources or the grapevine: "This research confirms that despite rapid technological change and the new communication capabilities that are available, it's still critical for managers to be key players in the internal communication process" (Whitworth & Riccomini, 2005, p. 22).

Whitworth and Riccomini were also able to conclude that the managerial communication effectiveness had a direct relation on employee job performance.

Caterpillar International exemplifies 'best practices' in an organization by not only understanding the value of face-to-face interaction, but also developing their headquarter architecture with this in mind. In their European headquarters in Geneva, Switzerland, they designed a common space modeled after the piazzas of Italy. Their employee mix is multi-cultural, and the challenge was to make them come together as a team. Most European cities and villages still operate under a framework of central squares where people can come together, get the news of the day, know what is going on and interact. "'Let's discuss it over a cup of coffee in the piazza' has become part of Caterpillar's culture in Geneva" (Goman, 2004, p. 16). It is a setting for both formal and informal ideas and information sharing.

Lastly, channel selection can also be critical within the confines of the cohort groups. The selection of the correct media for use with a specific audience is evidenced by examining increasing organizational diversity. There are generational preferences for media use. It is a delicate balance between efficient modes of communication and targeting the audience. Traditionalists (1901-1945) still prefer hand written and personal communication in the workplace, whereas Millennials (1980-present) are as equally satisfied with e-mail, instant messaging, texting or checking in on a Blackberry. Paul (2008) has identified the channel of

Table 3 Channel and Information Preferences by generational cohort (Paul, 2008).

Generation	Channel	Text/Graphic Messages
Traditionalist	▪ Print Media—newsletters, brochures ▪ In person, lecture- oriented workplace	▪ Honor and Dignity ▪ Respect for institutions ▪ Family security and protection ▪ Tribute to American Values ▪ Nostalgic embrace of "how it needs to be" ▪ Emphasize quality and history of program
Baby Boomer	▪ A mix of personal and electronic media	▪ Cutting-edge service ▪ Prestige ▪ Material Rewards ▪ Demonstrate values for money
Generation X	▪ Electronic, visual media--videos, television ads, CD- or Website-based Flash demonstrations or streaming, html e-mail ▪ Include opportunities to register online for Web-based seminars or order free information self-help kits	▪ Motivated by family themes, health and fitness ▪ Promote benefit to family ▪ Provide a mix of options and services ▪ More is better
Millennial	▪ Electronic, visual media--videos, television ads, CD- or Website-based Flash demonstrations or streaming, html e-mail ▪ Include opportunities to register online for Web-based seminars or order free information self-help kits ▪ In person, lecture-oriented workplace and opportunities that allow for practice and role playing-particularly for enhancing relationships and skills both at work and at home	▪ Create takeoffs of popular movie scenes and scripting ▪ Use sport-related analogies ▪ Have an ethnic orientation particularly borrowing from African American, Hispanic and Asian/Pacific Islander cultures

preference by generation, as well as the types of information they like to receive. These preferences can be found in Table 3.

Types of Information Typically Transmitted—Information Dissemination

Examination of information dissemination in organizations shows four critical factors: identification of the types of information being conveyed, the organizational culture, the cohorts involved in the processes, and the channels by which the information is conveyed. Human Resource (HR) professionals not only have a direct impact on each of these categories, but they are also challenged by the responsibility to train and facilitate their management staff to effectively develop, deliver, clarify, and support the message, as well as to strategize conflicts resulting from the dissemination of the message and to quell the ever-popular rumor mill.

At one time, communication was a face-to-face, synchronous process, limited by time and space—they or the group must all be present at the same place at the same time in order to communicate (Clampitt, 2005). Messages and information run the gamut in an organization. Information, knowledge, and messages can be organizational goals and objectives, performance appraisals, organizational performance, good news, bad news, new products or services, compensation and benefits, current or future events and training and development on any number of issues. Certainly, this list is not all-inclusive.

Borrowing from the discipline of economics, Wareham addressed the anthropologies of information costs and neo-classical and institutional views—

namely “where information is synonymous with reductions in uncertainty” (Wareham, 2002, p. 222). This applies directly to knowledge sharing and the type of messages that organizations must convey; knowledge sharing is defined as “the process where individuals mutually exchange their (tacit and explicit) knowledge and jointly create new knowledge” (De Vries et al., 2006, p. 116). Often the message is one-way communication—a directive, a request, facts—but in the spirit of a learning organization, this can be the beginning of productive dialogue and understanding. Through understanding, uncertainty is reduced and productivity is increased.

Uncertainty and equivocality are used interchangeably in much of the organizational literature. There is a difference between them, however. El-Shinnawy and Markus have concluded that “uncertainty is the absence of information…to reduce uncertainty, communication media need to bridge the gap between the amount of information already possessed and that required to performs the task” (1997, 445-446). Turner and Reinsch (2007), on the other hand, stated:

> Equivocality is the existence of multiple or conflicting interpretations of an issue. These interpretations are subjective and open to potential disagreement. To resolve equivocality, individuals must engage in a dialogue that exposes these different interpretations so that a resolution can be reached. (p. 40)

Succinctly stated, Daft, Lengel & Trevino (1987) define equivocality as "ambiguity." Whether the intent of the message is to bridge a gap or to clarify information, by reducing the equivocality or uncertainty—or even both—an organization can reduce misunderstandings and possible conflict. Rice and Shook (1990) devised a model of organizational media use in addressing the reduction of uncertainty and equivocality across job categories and organizational level.

Several dynamics can be present when sharing information for "people who are willing to share knowledge, the norm of reciprocity is important—they expect others to contribute as well" (de Vries et al. 2006, p. 117). Simply put, knowledge sharing that is built in trust has power (Goman, 2004). Research has shown that "people have a tendency to pool information that is already common knowledge to all members rather than information that is unique to one member" (Van Swol & Seinfeld, 2006, p. 179). Sias (2005) further reiterates the relationship between information and performance:

> The better informed the employees are, the less uncertain they are, the more satisfied they are with their jobs, and the better their perceived performance. Informed employees also tend to make better decisions and enhance organization knowledge development and distribution. (p. 375)

In knowledge-based economies of intellectual capital, "knowledge has replaced tangible resources as a measure of power" (Sias, 2005, p. 375). If, in fact, information is power, and the knowledge of that information is more

powerful, does this change the types of messages? No, but it does give power to one's ability to process the information and their reaction to the message. "In any situation defined by power imbalance, those with less power are continually going to assess how much they can safely say without compromising their relationships with higher-ups" (Bielaszka-DuVernay, 2004, p.4). It is also crucial for the one delivering the message to be cognizant of how the message will be received. Praise can be a vital factor in performance, as can a pep-talk to an employee who has shown signs of trouble. Pep-talks actually open the door for reciprocal information sharing. In one-way information sessions it is critical to be respectful of those involved; even a termination can be handled in a positive manner (Bogomolny, 2006).

The channels and media that transport the information have been addressed. Briefly, there has been a discussion of what types of messages are conveyed and the power that information and messages hold. Integrating the multi-generational focus, one is aware that Traditionalists dispense information on a need-to-know basis (Hicks & Hicks, 1995), whereas Generation X and Millennials, through the Internet, are used to being aware that information is there for the taking.

Impact of Communication Processes on Human Resource Professionals

The changes in communication processes do have a direct impact on HR professionals. First, technology is not only affecting the everyday work life of HR professionals, it is also a leading cause for decline in practicing professionals. A

perfect example is Rogers Communications—since installing an employee self-serve HR portal, where employees have 24/7 access to anything from pay stubs to benefit information and enrollments, they predict a minimum of $100,000 annually in cost savings. “If employees can go and somehow be provided with the means to serve themselves, more often than not they will. And not having to perform that service through an actual person, you’re saving on costs in a few ways” (Brown, 2002, p. 33).

With respect to the traditional roles that HR practitioners have had, those of applicant selection, interviewing, training, performance appraisals, compensation and benefits administration, and payroll distribution, technology has also taken its toll. From the perspective that the employee is the customer, needing information in regards to the aforementioned list, who is the one to relay this information, and through what channels?

The impact on the practitioner is great. Organizations now fully automate their HR systems. Selection is by complicated matrices of a computerized application process. Training is also now interactive DVD or computer programs. This can be problematic. Libby Sartain at Southwest Airlines clearly states:

> I love that we take chances on people. Many people pass over great candidates for promotions just because the person doesn’t have the credentials desired. We promote people whose best qualifications are good work performance and great attitude and it’s amazing what they

accomplish as compared to their credentialed counterparts" (Wong, 2000,p. 33).

If a computer program decides all selection and promotions, organizations may be passing over some excellent employees. Within the framework of the organization described, one that automates all or most of the HR selection process, a person who is over-qualified would not be granted an interview. A real-world example of this is an applicant who was an ex-Vice President of a financial institution and applied for a retail sales position. Under a system of automation, he would have be turned down for an interview because of his "over credentialed" application. Fortunately, he was hired before the automated system was established. He had the chance to explain that he was retired and "just wanted to have something to do." There was genuine information exchange, which made for a wise hire (Deborah West, personal communication).

It is not all doom and gloom for HR professionals on the technological front. Technology has opened the door for outsourcing and telecommuting. Telecommuting though requires "good communication skills, a solid plan and a track record for being available" when needed (Garvey, 2001, p.56). There are functions of the job that work better in an off-site setting, including recruiting, compensation and benefits, and the development of training courses. There are still times when it is important to have an on-site HR professional; these include, but are not limited to, dealing with difficult employee situations, during times of

major change or upheaval at the organization, or when employees need to talk to a HR representative.

The changes in the communication channels will most likely impact how HR professionals *disseminate* the information, not the information or message conveyed. HR professionals will have to continually increase their technical skills and abilities, and as organizational structure changes it will be crucial for them to be flexible team players. Human Resources has had an uphill battle to win the respect of the financial and operational ends of organizations, but they have begun to take their place at the strategic tables. As they are able to develop scorecard accountability, the most crucial thing for HR professionals to remember is the human element and desire for belonging, respect and purpose. Technology has reduced the amount of face-time with co-workers, superiors and subordinates, but individuals come to work every day, and the success of an HR professional will ride on his/her ability to integrate knowledge sharing, proper communication channels, understanding of multi-cultural and multi-generational workforces and intelligent respect in the delivery of information.

Communication Theories

It is important to address communication process theories in order to fully understand the integration of communication, information dissemination and the advances in technology. The three most relevant to this current research are Media Richness Theory (1984), Social Presence Theory (1976) and Organizational Justice (1986). Daft and Lengel proposed Media Richness Theory

(MRT) as a means to understand the media choice a manager selects for the dissemination of information—founded in part on Galbraith's information processing theory.

> The original MRT (Daft & Lengel, 1986) predicts that managers' choice of medium depends on the richness of the medium and the equivocality of the task, defined as the existence of multiple interpretations about an organizational situation. Efficient and effective managers will select media with information richness matching the level of equivocality of the communication task. (Sheer & Chen, 2004, p.78)

Channels of communication first addressed by Daft and Lengel were face-to-face, telephone, addressed documents (notes, memos, letters) and unaddressed documents (bulletins, standard reports, financial documents) (Daft, Lengel & Trevino, 1987). Richness of the channels (media) were determined by four different criteria:

1. Feedback: instant feedback allows questions to be asked and corrections to be made.
2. Multiple cues: an array of cues may be part of the message, including physical presence, voice inflection, body gestures, words, numbers and graphic symbols.
3. Language variety: the range of meaning that can be conveyed with language symbols.

4. Personal focus: a message will be conveyed more fully when personal feelings and emotions infuse the communication. (Daft, Lengel & Trevino, 1987, p. 358).

The greater the number of criteria met, the richer the communication is presumed to be. Thus, a hierarchy of media richness exists (fig.4). As the variety of available media has increased, there has been a need to expand the basic Daft and Lengel hierarchy. They refined their hierarchy in 1990 to rank the evolving technology, see Fig. 5.

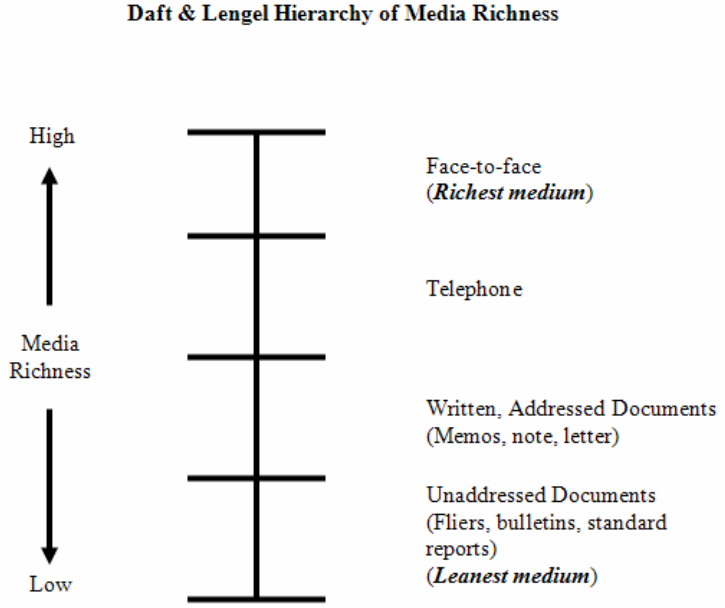

Figure 4 Hierarchy of Media Richness (circa 1987) (Daft, Lengel & Trevino, 1987)

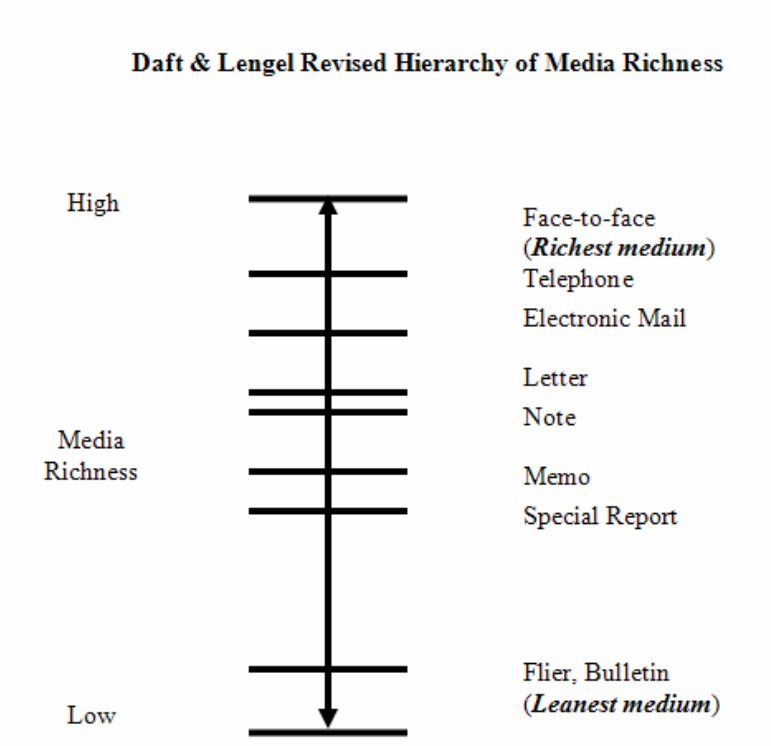

Figure 5 Revised Hierarchy of Media Richness (Circa 1990) (Trevino, Daft & Lengel, 1990)

The other theories in practice that address the specific needs of media choice as it pertains to the message (information) that needs to be conveyed as stated are social presence theory and one theory covered by the Organizational Justice umbrella. Ramirez and Zhang (2007) citing Short, Williams and Christie's Social Presence theory (SPT) proposes, in short, "that a central component of online interaction is the extent to which one's partner is perceived as salient by a communicator…this degree of salience experienced or 'social presence' is a function of the number of cue systems available in a given medium" (p. 290). According to Robert and Dennis (2005) SPT argues that:

> Media differ in the ability to convey the psychological perception that other people are physically present. Some mediums (e.g. video-conferencing or telephone) have greater social presence than the other mediums (e.g. e-mail), and the use of media higher in social presence should be important for social tasks such as building relationships." (p. 10)

Biocca, Harms, & Burgoon (2003) describe social presence in a networked society, a sense of being with one another in the virtual environment.

Greenberg "coined the term organizational justice to refer to theories and studies focused on the perceived fairness of exchanges and social interactions in organizational contexts" (Timmerman & Harrison, 2005, p. 381). Again, understanding how a message (information) is perceived is just as important as how the message is delivered and what the message consists of. One of the areas of organizational justice is interactional justice. "Bies and Moag (1986) defined interactional justice as the quality of interpersonal treatment people receive during enactment of organizational procedures" (Timmerman & Harrison, 2005, p. 381). Interactional justice is comprised of two components: informational justice and interpersonal justice. An example of informational justice is when a "recipient of a negative outcome often asks 'Why?' or 'Why me?' The adequacy with which the organization addresses this need for an explanation is informational justice. The impact of the choice of communication medium on the perceived adequacy of an account or explanation (informational justice)" is a consideration for managers (Timmerman & Harrison, 2005, p. 381).

Interpersonal justice is the “degree to which individuals are treated politely and respectfully by the decision maker while enacting procedures or communicating outcomes, similar to the benefit of providing an explanation for an undesirable outcome, personal and considerate treatment in the communication process increases the tolerance of negative outcomes” (Timmerman & Harrison, 2005, p. 382). One can conclude from this as well that different media choice for different messages is critical.

Interactional justice coupled with MRT prompted Timmerman and Harrison to suggest a rank ordering, a hierarchy of communication media that broadens Daft and Lengel’s initial and subsequent MRT hierarchy to include advanced communication technologies employed by organizations today. Table 4 illustrates this ranking.

Table 4 Rank Ordering of Communication Media by Promotion of Interactional Justice (Timmerman & Harrison, 2005, p. 383)

Rank	Media Type
1	Individual Meeting/Face-to-face (richest medium)
2	Phone Conversation
3	Group Meeting
4	Video Conferencing
5	Letter
6	E-mail
7	Group E-mail (leanest medium)

Timmerman and Harrison have identified email and group email as the leanest forms of media. Trevino, Daft and Lengel (1990) placed e-mail third in their revised hierarchy; this disparity in placement examines email from two different perspectives. One is an efficient tool for information dissemination while the other is more concerned with the information being disseminated.

The ability to develop, integrate and use an effective organizational communication system is at the core of effective organizations (Ulrich, 1997). Organizations have a variety of systems in place to move information from one location to another—media management, meeting management, public relation departments, and Human Resource systems—with technology providing new methods to remove barriers of space, economics, distance, and time (Ulrich, 1997).

Human Resources' Role in Navigating the New Frontier

In 2004, Mark Huselid, Editor of *Human Resource Management* commented on the intersection of information technology and Human Resources,

> Indeed, the popular press frequently touts how IT can help managers significantly enhance the ability of HR leaders to deliver results to the business. The assumption has been "we'll automate the transactional or low value-added activities, leaving additional time and resources for more strategic pursuits." While this type of statement certainly has some conceptual appeal, its accuracy is likely to be challenged by any HR

> leader who has struggled with large-scale human resource information system intervention that met neither its budget nor its performance targets. The simple fact is we know very little about the impact of information technologies on the effective design and delivery of human resource management systems. (p. 119).

Huselid's sentiment is echoed in *HR Focus* in their article on *"*HR Technology Trends to Watch 2007*,"* which notes that "technology can be a tremendous help to HR, but it can also present huge challenges including cost, implementation, getting employees and managers to use the resources, determining ROI, and arranging interactions with the HRIS staff" (p. 1).

If this is so, what are the implications for HR in media choice or organizational design due to the advancements in communication technology?

- Are HR professionals capable of realistically assessing and contributing to organizational design, job structures and employee efficiency?
- What are the implications for Human Resource (HR) professionals for a multi-generational workforce?
- What are the implications and strategies that can and will be utilized to navigate this new frontier?

There are, in fact, two things going on in the arena of technology advancements and HR: 1) the specific channels chosen to disseminate the information and 2) the changes in organizational and workplace structure.

Technology has been a permanent, albeit changing, fixture of the workplace since the 60's with the advances first in office equipment, then in the speed of information transmission and methods of communication.

Media Channels

Historically, organizations could communicate with their employees utilizing traditional means: face-to-face, meetings, newsletters, memoranda, letters, bulletin boards, telephones and paper trails. The growth in office machines such as typewriters, copiers, scanners, and faxes led a revolution to expedite the quantity and quality of information dissemination. Documents once were transmitted via regular post, but in the late 1980's overnight local and long distance delivery services became a key way to distribute information. In the 1980's "use of facsimile machines increased 92%, going from 300,000 to 4,000,000 between the years of 1982-89 (Mamaghani, 2006, p. 846). These advancements have decreased the lag time from information inception to information dissemination. The 1990's and beyond have seen the lag lessen as use of the Internet and e-mail, teleconferencing, texting and the use of personal digital assistants (PDA's) have brought information dissemination into real time transactions. At any given time, on any given day you can have an office in your pocket, no matter where you are. Technology has not only decreased the time to relay information or make decisions, it has lessened the distance of time and space.

Media channels have certainly increased, and as some are adopted by organizations, others are eliminated. In addition, as organizations become more socially conscious, it is a conscientious choice to utilize green, non-paper-producing channels. The federal government passed the Paperwork Reduction Act of 1995 to increase the efficiencies and decrease waste of valuable resources. Most government forms are now not only available online, but can be submitted online.

CHAPTER III: METHODS

This section describes the research setting, study participants, sample size and procedures followed in collecting and analyzing the data.

Research Setting

The research setting is the Extension Service at a major land-grant university whose agents are geographically dispersed throughout the state. These agents represent the target population, which is comprised of white-collar office workers. The population is a cross-generational workforce that utilizes multiple channels of communication technology whose organization is interested in determining the most effective and efficient route for productive communication. The stated mission of the Extension system is to help people improve their lives through an educational process that uses research-based knowledge to address issues and needs, teaching citizens to make better decisions to improve their lives, homes, farms and communities.

Participants and Sample Size

The investigator used purposeful sampling to identify participants for the present study. Participants were sought across all four age cohorts who are Extension agents. The agents have both pragmatic and administrative responsibilities as well as direct responsibility for the administration and delivery of programs to the community. The agents hold similar general work responsibilities, such as reporting functions of a routine or recurring nature; managing and archiving

paperwork, electronic data and people's schedules; database entry and maintenance; transcribing and entering data; coordinating and collaborating with work groups to achieve their goals; and providing services to internal and external customers.

There are four primary areas of Extension: 4-H Youth Development, Agriculture, Family and Consumer Sciences and Community Resource Development. Depending on the size or need of the counties, some agents are responsible for more than one functional area of responsibility. As well, some agents work as both the Extension agent for the county as well as being the County Director. The agents, based on need or research, develop and conduct educational programs for people that want to help themselves to an improved quality of life. This job type was held constant across age cohorts.

Sample Size

For this study, those with the title of Extension Agents were selected. The maximum number of extension agents possible at the time of the survey (March 10-20, 2009) was 305-309. This number was comprised of 286 Extension agents paid through 1862, the land-grant University system, 14 Extension Agents paid through the 1890 State University Cooperative Extension System and less than 10 Extension Agents paid exclusively through county funds. At the specific time of the survey, there were 285 employed agents. Ten agents had participated in the initial pilot study; therefore, the resulting *n* was 275 agents available for participation in the final study. All agents were invited to complete the survey.

The survey took less than 15 minutes to complete, which was the extent of the subjects' involvement.

Data Collection and Analysis Procedures

Appendix A represents the survey instrument for the present study that was administered via a link through the University's Office of Information Technology (OIT) and the Statistical Consulting Center to a survey that was built using DimensionNet, a Statistical Package for the Social Sciences (SPSS) program for the development, delivery and collection of data for surveys.

The design of the study was in two phases: a pilot study and an electronic survey delivered to the sample population. The phases involved virtual contact (discussion and survey completion) and anonymous data collection via a hyperlink to the SPSS collection software. The following discussion provides an overview of the electronic survey, which was the data collection method used in the present study. The last question of the survey was an open-ended question. Content analysis procedures were used to analyze responses to this question, which generated coding, themes and patterns (Miles & Huberman, 1994; Patton, 2002).

The Electronic Survey

The advent and implementation of communication technologies have also opened another door for surveys and data collection. Electronic surveys in

general did not sustain high response rates initially, which may be due in part to Media Richness Theory (MRT). Simsek and Veiga (2001) posit that the "low transmission of non verbal cues, varied language, [lack of] timely feedback and a low sense of personalization" (p. 221)—all primary components of MRT-- were responsible for this lack of response. However, the varying modalities can be applied to electronic surveying that translate to more media rich experiences. Downing and Clark (2007), in a review of response rate by medium, pointed out that Bachmann, Elfrink and Vazzana (1996; 2000) found a 13% difference in response rate favoring mailed surveys, whereas Schafer and Dillman (1998) found no significant difference between the two methods of survey.

Downing and Clark (2007) provide insight on the trend toward the adoption of electronic survey techniques in an advancing age of communication technology: "Communication scholars and practitioners are adapting traditional survey methodologies for employees who communicate in an increasingly mediated environment" (p. 249). The maturation of the media itself is another reason for the increase in response rates. In the media's infancy, electronic surveys were sent as attachments, which were labor intensive for participants. They opened the attachment, completed the survey, saved the information, and sent it back to the originator. This earlier type of electronic survey is still utilized by researchers. Current electronic surveys include questions embedded in an email as well as downloadable interactive surveys. The most favored method for electronic surveys today is an email with a URL or hyper-link that takes the

participant directly to the survey. Bonomette and Tang (2006) argue that interactive windows-based surveys are user-friendly: “Interactive form-oriented web pages provide a highly available platform for survey-based research data collection” (p. 97).

Holtz (2004) also lists the PROS of using web based survey methods within an organization for data collection:

- You can reach geographically dispersed employee groups more quickly and more cheaply than paper-based surveys.
- Online surveys, constructed and administered with good software, are easier and faster to complete. In the first three days online, the survey will generate more than 70 percent of the total data collected.
- Response rate is higher and faster than conventional paper-and-pencil surveys (p. 257-258).

Other benefits of using electronic surveys for data collection include lower cost than mailed surveys or face-to-face surveys, ease of data collection (responses go directly to the database for analysis), anonymity for more truthful responses by participants, reminders of incomplete responses to participants increases those surveys that can be used, and any open-ended questions do not need transcription (Holtz, 2004; Downing & Clark, 2007; Bonometti & Tang, 2006; and Simsek and Veiga, 2001).

Faught, Whitten and Green (2004) also determined empirical evidence that timing of survey distribution is also critical. The exploratory sample used in

their study consisted of 14 groups (one group for each morning and afternoon of each day of the week) that were randomly assigned. They determined surveys distributed on Wednesday morning had a 54% increase in response rate. Supportive evidence is growing for the use of electronic survey. As stated earlier, an electronic survey is a critical element in the present study. 204 agents completed the survey for a response rate of 77%.

Instrument

The International Communication Association (ICA) Audit was utilized as the base for the instrument in this study. Originally developed in the late 1970's by Goldhaber and Krivonos (Hargie & Tourish, 2000), this audit covers eight dimensions/scales:

1. Receiving information from others
2. Sending information to others
3. Follow-up on information sent
4. Sources of information
5. Timeliness of information received from key sources
6. Organization communication relationships
7. Organizational outcomes
8. Channels of information

The ICA uses a Likert scale and has an average completion time of 45-60 minutes when taken in its entirety (Hargie & Tourish, 2000). Most organizations tend to utilize specific scales in the assessment of their communication: "Of the

eight individual scales in the ICA Audit, three scales were used most frequently: Organizational Communication Relationships, Organizational Outcomes (which measures satisfaction with the job) and Information Received" (DeWine, 2004, p. 195). The advantage of using the ICA Audit as a base for channels research is the flexibility of the channels scale itself. Traditionally, the Channels scale is most often "adapted to the individual organization being audited; the organization lists specific channels present in that environment" (DeWine, 2004, p. 194). The list of channels provided in the ICA Audit is:

Face-to-Face

Written memos, letters and notices

Bulletin Boards

Corporate Newsletters

Plant newspaper

Procedural manual

Home mailings

Pay envelope stuffers

Communication committee minutes

Safety steering committee minutes

Shift Briefings

Meeting with supervisor

Meeting with divisional management

Meeting with plant management

Departmental safety meetings

Although many categories are listed (true to the time), the categories represent two overall channel types: face-to-face and written documents. The lapse of thirty years of advancements in technology has increased the types of communication channels beyond face-to-face and printed communication. Now, widely used communication channels include: telephone, electronic communication and virtual communication. Use of the telephone for communication was surprisingly absent from the ICA list. Electronic communication includes, but is not limited to e-mail, text, IM, Blackberry-type communication. Virtual communication includes I-chatting, teleconferencing, video/audio phone meetings, 24/7 accessibility of a subject matter expert and real-time image and data transfer so associates can literally be on opposite sides of the earth, but still communicate as if they are in the same room.

DeWine (2004) note the ICA Audit has been tested for 30 years and has "consistently received high internal reliability scores" (p. 195) with coefficient alphas averaging in the 90's. Validity, on the other hand, has come under some scrutiny because it is unclear as to whether there is a clear-cut definition for validity in the original ICA researchers' argument supporting their method. While the original authors of the audit tested validity, others have challenged the methods used. Greenbaum, DeWine, and Downs (1987) suggested that confusion has arisen over the definitions of validity. For example, whereas predictive validity refers to a measure's ability to predict a respondent's behavior,

ICA Audit researchers defined predictive validity as 'the correlation between two portions of a self report instrument" and argued the "the instrument had predictive validity because of a variety of satisfaction measures were related to self-reports of organizational outcome variables in the same instrument" (Greenbaum, et al, 1987, p. 136). It would be useful to measure the predictive validity of the audit by testing the self-report instrument against actual organizational behavior. (DeWine, 2004, p. 197)

Validity may be one limitation of the ICA Audit as a base. Zimmermann, Sypher, & Haas (1996) challenge the utility of the information of the ICA Audit for organizations. The ICA Audit consistently measures the quantity of communication, not necessarily the quality or the information communicated. While the ICA is a sound starting point, it does not adequately address today's workforce needs regarding productivity issues in particular nor does it address HRD concerns.

The audit also lacks a meaningful zero, which complicates the participant's response if the category does not apply directly to their organization. In this case, participants can do nothing except leave the question blank or choose the lowest response, the ability to assign a 'not applicable' category to allow participants a reason for not choosing a response. It will also allow or alert the researcher, during analysis, to establish what information or what channels are not a variable in their specific organization or job category.

In addition to the ICA Audit's channel scale, the survey instrument for the present study utilizes personal constructs for the word "productive" identified in the Kupritz and Cowell (in press) qualitative study. The instrument also includes productivity categories identified in the Kupritz (2005) qualitative study. Both the Kupritz and Cowell and Kupritz studies examined office worker perceptions of productivity issues. The Kupritz and Cowell (in press) study, in particular, examined employee perception of management communication received face-to-face and through electronic mail. The Kupritz (2005) study targeted employee perception of productivity issues for four basic job types.

The survey instrument for the present study initially describes personal constructs for the word "productive," which is a crucial word in the instrument. These constructs were identified in the Kupritz and Cowell (in press) study. In this earlier study, workers defined productive as: producing; completing a job or task in a productive manner; to move forward; doing your job in a competent, efficient and accurate manner; to effectively use time and resources that are available to complete a desired task in the shortest time possible; to do quality work in a timely manner; generating work in a successful and timely way; and completing a task in an efficient amount of time. Prior to the official interview, each participant reviewed these constructs for accuracy to ensure a shared meaning of language: "Respondents agreed that the descriptions accurately conveyed the meaning of 'productive'" (p.24).

Variables

V1: Information Categories

This categorical variable is defined by:

1. Private and Confidential (including evaluations, performance reviews)
2. Routine and Procedural (Standard Operating Procedures)
3. Time-Sensitive (emergency situations, tasks with immediate urgency, tasks with shortened deadlines)
4. Training (initial on-the-job training, subsequent training, workshops, modules and orientation)
5. Compensation and Benefits (plan selection, changes in compensation and benefits packages, new offerings)

V2: Communication Channels

This categorical variable is defined by:

1. Face-to-face
2. Telephone
3. Written Documents (memos, letters, newsletters, manuals, instructions, bulletin boards)
4. Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)
5. Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)

V3: Age

This categorical variable is defined by:

1. TBB – Consisting of the Traditionalist and Baby Boomer generations
2. GenXM – Consisting of Generation X and Millennial generations

V4: Productive

This interval variable comes from the scores from the average of 8 items scored from 1 to 5, with 1= strongly disagree to 5= strongly agree

PF2F=Productivity face-to-face

PT=Productivity telephone

PWD=Productivity Written Document

PEM=Productivity Electronic Media

PVM=Productivity Virtual Media

V5: Unproductive

This interval variable comes from the scores from the average of 8 items scored from 1 to 5, with 1= strongly disagree to 5= strongly agree

UPF2F=Productivity face-to-face

UPT=Productivity telephone

UPWD=Productivity Written Document

UPEM=Productivity Electronic Media

UPVM=Productivity Virtual Media

Pilot Study- Phase1

The pilot study was conducted to ensure that the productivity construct was understood and that there was a shared meaning of the language (Denizen & Lincoln, 1994; Patton, 2002; and LeCompte & Schnensul, 1999). Participants in

the pilot study for this research were asked for their own definitions of the constructs and asked to review the list. They reviewed the list of constructs and were instructed on the definition of the construct “productive”.

The initial pilot study was conducted in a virtual setting using Centra. The pilot study participants selected were demographically representative of both the regional/geographic distribution across the state (east, mid, and west) and service areas (urban, suburban, and rural). Three counties participated. One purpose of the pilot study was to establish a shared meaning of the word “productive” and to develop a shared meaning of the word “unproductive.” The participants were given the survey in advance of the virtual meeting so they could complete the survey, establish how long it took and note any issues with the survey. Once the survey was completed, the virtual meeting took place with all participants present to discuss the survey.

The first step included discussion to determine the shared language for terms that were predefined in the survey: Productive. Resulting issues and shortcomings with the survey were discussed. This discussion resulted in the definition, agreed on by all parties, for ‘management’ as well as ‘unproductive.’ “Management” was defined as the person that they receive the bulk of their information from-their immediate supervisor as well as one level up from their supervisor, whoever is responsible for the primary delegation of tasks and workload to the agents. ‘Unproductive’ was defined by the pilot study as waste of time; not relevant to my job; does not add anything to my job; of no value to my

job; and does not make my job more productive or effective. The pilot participants also discussed the length of the survey and the ease to take the survey. Based on comments, some modifications to the flow of questions were made to the final survey.

Survey Instrument- Phase 2

The final instrument was built into the DimensionNet System and refined based on the discussion of the participants in the pilot study. Definitions for "unproductive" and 'management' were included. The Dean of Extension, upon reviewing the instrument with his staff, then e-mailed all Agents requesting that they participate in the study and reaffirmed his commitment to improving communication within their organization. A link to the survey was provided in this e-mail. Participants were given 10 days to complete the survey. A reminder was sent out midweek for those that had not yet completed the survey. The survey provided assurance of anonymity and voluntary participation and that completion of the survey constituted the subjects' consent to participate. They were also notified that only aggregate data would be shared with the organization in order to uphold their commitment to more productive means of communication to serve the state.

The survey was distributed via electronic mail with a link to the survey site. It is critical to take it electronically as one of the focus areas of the study is communication technology. The ability to both distribute the instrument and

receive the data via electronic communication is evidentiary of the use of technology in the workforce and stays within the overall focus of the study.

Reliability and Validity

The ICA Audit's channel scale, which was used in the present study's instrument, indicates a strong internal consistency alpha value of .89 (Rubin et al, 2004). Credibility of the study's instrument is further established by utilizing the "productivity" language from the Kupritz and Cowell (in press) and Kupritz (2005) studies. This language was couched in the same frame of reference and meaning system as participants in the two studies (LeCompte & Schnensul, 1999; Patton, 2002). Such qualitative measures are considered especially strong in construct validity (Denzin & Lincoln, 1994; LeCompte & Schensul, 1999; Patton, 2002; Tyler, 2006). Further, domain analyses in the Kupritz and Cowell and Kupritz studies produced strong interrater reliability coefficient of .95.

All scales for productive and unproductive were tested for consistency across channels using Cronbach's alpha. To further establish construct validity, exploratory factor analysis (EFA) was used to ensure that the constructs held. Items that did not load at +/- 0.40 were to be dropped. Reliabilities and correlations verified construct validity by establishing convergent validity (items measuring each construct were highly correlated) and discriminant validity (items measuring separate constructs were not highly correlated).

Hypothesis Testing

Hypotheses 1-3 were developed to operationalize the study's first research question: *In what ways does age affect generational perceptions of communication from management in today's workforce?*

Hypothesis 1

Types of information received from management will affect channel preference across age cohorts.

Testing this hypothesis helps to determine generational preference based upon the types of information that the extension agents receive from management. Age cohorts were collapsed into two subgroups for statistical power. The sample size for the GenTBB subgroup (N=119) consisted of Traditionalists (N=6) and Baby Boomer (N=113) generations. The sample size of the GenXM subgroup (N=85) consisted of Generation X (N=55) and Millennial (N=30) generations.

Subgroup Means of channel preference rankings (for face-to-face, telephone, written documents, electronic media and virtual media) were computed for each type of information (personal and confidential, routine and procedural, time-sensitive, training and compensation and benefits).

Hypothesis 2

Older Workers will prefer "richer" communication channels for receiving all types of information from management, regardless of the message.

Hypothesis 3

Younger workers will prefer “leaner” communication channels for receiving all types of information from management, regardless of message.

Hypotheses 2 and 3 examine to a greater degree the preference of channel type selected for information dissemination across age cohorts. Based on the literature review for communication preferences of the different generations it is assumed that older workers, those represented by the GenTBB population, would prefer more traditional and richer communication channels. “Richer” channels refers back to Media Richness Theory (MRT) wherein face-to-face is the richest form of communication due to the additional ‘cues’ that are available in one-on-one communication including body language, tone of voice, immediacy of feedback and the infusion of emotions and feelings into a conversation. “Traditionalists typically feel that electronic forms of communication are cold and impersonal (not to mention complex and confusing). “For them, communication is best done one-on-one – either in person, by phone or through personal note” (Bernstein, 2006, p. 13).

It is critical to strike a balance between electronic channels and face-to-face channels. As with the Traditionalists, communication based on electronic and virtual channels can be seen as impersonal, though they have made strides to gain competence in computer mediated communication (CMC) (Bernstein, 2006). Electronic communications can also “be extremely infuriating to older generations, who were raised to communicate face-to-face in the office when you

had an issue because it was the right thing to do (and these technological options didn't exist" (Gravett & Throckmorton, 2007, p. 135).

In contrast to GenTBB, GenXM "tends to rely heavily on technology for communication" (Gravett & Throckmorton, 2007, p. 135). Gravett and Throckmorton also conclude that the casual sharing of information via electronic channels as well as in a casual atmosphere such as lunch are equally amenable to the younger generations. The key with all communication is finding the balance in your workforce which will net a more productive work environment. This knowledge assumes that younger generations would not only prefer, but they would be as productive receiving information from management through 'leaner' channels of communication.

Based on these assumptions, the researcher believes that information category is secondary to preferred communication channel by generational cohort. Hypotheses 2 and 3 were tested by comparing subgroup Means of channel preference rankings for each type of information and the independent samples t-Test computed.

Hypotheses 4a-d and 5a-d were developed to operationalize the study's second research question: *What are the generational perceptions of productive/unproductive information dissemination in communication processes?* Hypotheses 4a-d examine not only the relationship of productivity for productive information in relation to the age cohorts, but they explore the relationship of

increase of morale and trust and the decrease of stress when information is disseminated through a particular channel.

Receiving information from management through preferred channel types will affect productivity across age cohorts. To reiterate, the word 'productive' in this survey means one or more of the following: producing; completing a job or task in a productive manner; to move forward; doing your job in a competent, efficient and accurate manner; to effectively use time and resources that are available to complete a desired task in the shortest time possible; to do quality work in a timely manner; generating work in a successful and timely way; and completing a task in an efficient amount of time.

Productivity also relies on engagement of the employee. In "*Igniting Gen B & Gen V*," Nancy S. Ahlrichs states "only engaged employees in an organization that places high value on productivity and innovation will deliver, no matter what stage of their career" (p. 23, 2007). Ahlrichs (2007) also cites the 2006 Pew Internet & American Life Project survey that notes that as of December 2006 71 percent of people between the ages of 50 and 64 and 32 percent of people between 65 and older are online daily" (p. 58) and that "speed and quality of communication is the critical tool in organizations" (p. 58). Finally, the survey surmised that "employees that function without voicemail, email and other high-tech tools cannot fail to be out of the loop in their department, company or industry. Lack of Internet access cuts off access to e-learning and webinars…long-time employees need just in time development tools, too.

Anything less guarantees slower performance" (p. 59). This research on the impact of engagement on productivity leads to hypotheses 4a-4d. To test this, the five item scale of productivity for productive information (decreases work error, decreases work delays, makes it easier to keep up with fast paced work, reduces interruptions and makes it easier to complete work tasks) was transformed into a new variable "productivity levels for productive information by [channel type]."

Hypothesis 4a: Productive information received from management through particular channel types will increase productivity levels across age cohorts. Five multiple regressions were computed.

1. "Productivity levels for productive information face-to-face" was regressed onto age.
2. "Productivity levels for productive information via telephone" was regressed onto age.
3. "Productivity levels for productive information via written document" was regressed onto age.
4. "Productivity levels for productive information via electronic media" was regressed onto age.
5. "Productivity levels for productive information via virtual media" was regressed onto age.

Hypothesis 4b: Productive information received from management through particular channel types will increase morale across age cohorts.

In a recent survey by Robert Half International, “48% of executives cite better communication as the best remedy for low morale” (Heffes, 2009). Not surprisingly another survey conducted by Accountemps netted a similar result with 37% of respondents claimed that the most common step for improving employee morale is increasing communication (*HRFocus*, 2009). Both reports concluded an engagement/productivity outcome to the communication/morale increase.

Frequency analysis was conducted on the increase of morale as a result of perceived productive information across all five channels of communication. The communication channel with the greatest increase in morale frequency was then regressed onto age.

Hypothesis 4c: Productive information received from management through particular channel types will increase trust across age cohorts.

Trust has tangible benefits to both individuals and organizations (Deal, 2007). Indeed, Young and Daniel, (2003) and Kramer, (1999) argue that trust makes interacting easier and more positive for all generations and reduces transaction costs for organizations. If trust does not exist among at least some people in the organization-whatever their generations-employees have to spend time figuring out whom they can trust and when and under what conditions they actually trust. This increases the time it takes to get work done (Kramer, 1999).” Deal (2007) notes the net result of trust in an organization is if employees trust, “they can be much more productive” (p. 64).

Frequency analysis was conducted on the increase of trust as a result of perceived productive information across all five channels of communication. The communication channel with the greatest increase of trust frequency was then regressed onto age.

Hypothesis 4d: Productive information received from management through particular channel types will decrease stress across age cohorts.

There is an obvious connection between stress and communication. Indeed, Frisinger (2009) emphasized: “At the foundation of stress is communication; more often than not it is due to the lack of communication” (p. 17). Taylor, Fieldman, and Altman (2008) reported Romm and Pliskin’s 1999 report that email may have inbuilt work stressors due to speed, increased number of communications, and multiple addressability. Particular attention will be paid to the relationship between stress and electronic media channel and the variance between generations.

Frequency analysis was conducted on the decrease of stress as a result of perceived productive information across all five channels of communication. The communication channel with the greatest decrease of stress frequency was then regressed onto age.

Hypotheses 5a-d examines not only the relationship of productivity for unproductive information in relation to the age cohorts, but they explore the relationship of the decrease of morale and trust and the increase of stress when information is disseminated through a particular channel. If the research on

productivity holds true, then the converse can be concluded with unproductive information and levels of productivity. To test this, the five item scale of productivity for unproductive information (increases work error, increases work delays, makes it harder to keep up with fast paced work, increases interruptions and makes it harder to complete work tasks) was transformed into a new variable "productivity levels for unproductive information by [channel type]."

Hypothesis 5a: Unproductive information received from management through particular channels will decrease productivity levels across age cohorts.

Five regressions were computed.

1. "Productivity levels for unproductive information face-to-face" was regressed onto age.
2. "Productivity levels for unproductive information via telephone" was regressed onto age.
3. "Productivity levels for unproductive information via written document" was regressed onto age.
4. "Productivity levels for unproductive information via electronic media" was regressed onto age.
5. "Productivity levels for unproductive information via virtual media" was regressed onto age.

Hypothesis 5b: Unproductive information received from management through particular channels will decrease morale across age cohorts.

Frequency analysis was conducted on the decrease of morale as a result of perceived unproductive information across all five channels of communication. The communication channel with the greatest decrease in morale frequency was then regressed onto age

Hypothesis 5c: Unproductive information received from management through particular channels will decrease trust across age cohorts.

Frequency analysis was conducted on the decrease of trust as a result of perceived unproductive information across all five channels of communication. The communication channel with the greatest decrease in trust frequency was then regressed onto age.

Hypothesis 5d: Unproductive information received from management through particular channels will increase stress across age cohorts.

Frequency analysis was conducted on the increase of stress as a result of perceived unproductive information across all five channels of communication. The communication channel with the greatest increase in stress frequency was then regressed onto age.

CHAPTER IV: RESULTS

This chapter presents the results of the study. General characteristics of the sample are reviewed including response rate and descriptive statistics. Next, the reliability and validity of the constructs are examined. The final portion of this chapter reports on the hypothesis testing. General linear models, linear regressions, independent samples *t*-test, ANOVA's for mean comparisons were used to test the hypotheses using Statistical Package for Social Sciences (SPSS) version 17.0.

Response Rate

The electronic survey was completed by 204 of the possible 285 employed agents. Ten agents had participated in the initial pilot study: therefore the resulting *n* was 275 agents available for the survey. All agents were sent the link to take the survey, 71 agents did not participate, resulting in a response rate of 74%. Since participation was voluntary and anonymous, the researcher had no way of establishing the reason for a participant not completing the survey, or if they were unavailable during the time frame of the survey administration.

Descriptive Statistics

The first series of questions were to define the demographic make-up of the study participants. The first questions asked the year born to establish what generations were represented. All four generations were represented by the study participants, 3% were Traditionalists (*n*=6), 55% Baby Boomers (*n*=113),

27% Generation X (*n*=55) and 15% Millennial (*n*=30). The next set of questions was basic demographic questions of gender and ethnicity. Study participants were 52% Male (*n*=106) and 48% female (*n*=98). Population was made of 94.1% Caucasian (*n*=192), 3.9% African American (*n*=8), .5% Native American (*n*=1), .5% Hispanic/Latino (*n*=1) and 1% Other, unclassified (*n*=2). The last section of demographic information collected was specific to the study population itself. Participants can hold more than one area of accountability within their system. 52% (*n*=107) have accountability in Agriculture, 32.8% (*n*=67) Family and Consumer Sciences, 23% (*n*=47) Community Resource Development, and 49% (*n*=100) in 4-H Youth Development. Lastly, the agents are spread across the state and are located in three primary geographic areas: rural 73% (*n*=149), suburban 16.7% (*n*=34) and urban 10.3% (*n*=21). Tables for all demographic results can be found in Appendix B.

Missing Data

The survey was designed so that all fields had to be completed before advancement, thus there was no missing data.

Reliability and Validity

Scales for this instrument were evaluated by assessing exploratory factor analysis (dimension reduction), reliability analysis and inter-item correlations to

determine the reliability and validity of the instrument and the constructs. Detailed results are presented in Appendix C.

Productivity Face-to-Face (PF2F)

All eight items from this scale loaded onto one factor, explaining 60.345% variance with loading ranging from .729-.805. Inter-item correlations ranged from $r = .409$ to $r = .766$ with all the correlations significant at the .01 level. The coefficient alpha for the scale was .906, which supports the 30+year history of coefficients in the high 90's for the ICA audit from which this scale was adapted.

Productivity via Telephone (PT)

All eight items from this scale also loaded onto one factor as well, explaining 62.305% variance. Factors loaded in the range of .704-.859. Inter-item correlations ranged from $r = .349$ to $r = .826$ with all the correlations significant at the .01 level. The coefficient alpha for this scale was .912.

Productivity via Written Document (PWD)

All eight items loaded onto one factor with loadings ranging from .733-.830, explaining 60.22% variance. Inter-item correlations ranged from $r = .347$ to $r = .845$ with all the correlations significant at the .01 level. The alpha coefficient for this scale was .903.

Productivity via Electronic Media (PEM)

All eight five items of this scale loaded onto one factor, and the last three also loaded onto another factor in addition to the first. Factor loadings for the first factor ranged from .756-.849 explaining 64.942% variance and the last three factors loaded onto another factor ranging from .337-.567 with variance explanation of 13.827%. Inter-item correlations ranged from $r = .369$ to $r = .848$ with all the correlations significant at the .01 level. The alpha coefficient for this scale was .915.

Productivity via Virtual Media (PVM)

Again, all eight items loaded onto one factor with loadings ranging from .714 to .867, thus explaining 67.540% variance. Inter-item correlations ranged from $r = .466$ to $r = .865$ with all the correlations significant at the .01 level. The coefficient alpha for this scale was .929.

Unproductivity Face-to-Face (UF2F)

All unproductive F2F items loaded onto one factor with loadings ranging from .742-.885 explaining 67.995% variance. Inter-item correlations ranged from $r = .456$ to $r = .798$ with all the correlations significant at the .01 level. The coefficient alpha for this item was .931.

Unproductivity via Telephone (UT)

All eight items again loaded onto one factor with a range of .813-.910 explaining 74.965% variance. Inter-item correlations ranged from $r = .553$ to $r = .899$ with all the correlations significant at the .01 level. Coefficient alpha for this item was .951.

Unproductivity via Written Document (UWD)

All eight items loaded onto one factor with a range of .857-.913 explaining variance of 78.984%. Inter-item correlations ranged from $r = .643$ to $r = .901$ with all the correlations significant at the .01 level. The coefficient alpha for this factor was .962.

Unproductivity via Electronic Media (UEM)

Unlike PEM, all eight UEM items loaded onto one factor. Factor loadings ranged from .794-.908. This explains 73.534% variance. Inter-item correlations ranged from $r = .483$ to $r = .886$ with all the correlations significant at the .01 level. Alpha coefficient for this scale was .948.

Unproductivity via Virtual Media (UVM)

All eight items again loaded onto one factor with a factor loading range of .815-.917. 76.245% variance explained. Inter-item correlations ranged from $r = .557$ to $r = .982$ with all the correlations significant at the .01 level. The coefficient alpha for this scale was .955.

Summary

These results, summarized in Table 5, verify convergent validity of the scales. Correlations among the scales (see Table 6) were used to confirm discriminant validity. Descriptives of the scales (see Table 7) provide additional details.

Table 5 Factor Analysis and Reliability

Construct	Factor Loadings	% of Variance	Cronbach's Alpha
Productivity Face-to-face PF2F	.729-.805	60.345	.906
Productivity Telephone PT	.704-.859	62.305	.912
Productivity Written Document PWD	.733-.830	60.22	.903
Productivity Electronic Media PEM	.756-.849	62.942	.915
Productivity Virtual Media PVM	.714-.867	67.54	.929
Unproductivity Face-to-face UF2F	.742-.885	67.995	.931
Unproductivity Telephone UT	.813-.910	74.965	.951
Unproductivity Written Document UWD	.857-.913	78.984	.962
Unproductivity Electronic Media UEM	.794-.908	75.534	.948
Unproductivity Virtual Media UVM	.815-.917	76.245	.955

Table 6 Correlation Matrix for Scales

		prodf2f	prodt	prodwd	prode	prodv	unprodf2f	unprodt	unprodwd	unprode	unprodv
prodf2f	Pearson Correlation	1	.554**	.176*	.062	.010	-.071	-.048	.098	.082	.152*
	Sig. (2-tailed)		.000	.012	.381	.889	.313	.497	.162	.243	.030
	N	204	204	204	204	204	204	204	204	204	204
Prodt	Pearson Correlation	.554**	1	.304**	.132	.204**	-.084	-.190**	-.031	-.012	-.026
	Sig. (2-tailed)	.000		.000	.059	.003	.233	.006	.658	.863	.714
	N	204	204	204	204	204	204	204	204	204	204
Prodwd	Pearson Correlation	.176*	.304**	1	.272**	.215**	.041	.003	-.075	-.029	-.098
	Sig. (2-tailed)	.012	.000		.000	.002	.561	.967	.289	.679	.163
	N	204	204	204	204	204	204	204	204	204	204
Prode	Pearson Correlation	.062	.132	.272**	1	.439**	.194**	.252**	.162*	-.032	.069
	Sig. (2-tailed)	.381	.059	.000		.000	.005	.000	.020	.647	.324
	N	204	204	204	204	204	204	204	204	204	204
Prodv	Pearson Correlation	.010	.204**	.215**	.439**	1	.113	.084	.034	.056	-.167*
	Sig. (2-tailed)	.889	.003	.002	.000		.107	.233	.632	.430	.017
	N	204	204	204	204	204	204	204	204	204	204
unprodf2f	Pearson Correlation	-.071	-.084	.041	.194**	.113	1	.759**	.556**	.480**	.515**
	Sig. (2-tailed)	.313	.233	.561	.005	.107		.000	.000	.000	.000
	N	204	204	204	204	204	204	204	204	204	204
Unprodt	Pearson Correlation	-.048	-.190**	.003	.252**	.084	.759**	1	.660**	.581**	.630**
	Sig. (2-tailed)	.497	.006	.967	.000	.233	.000		.000	.000	.000
	N	204	204	204	204	204	204	204	204	204	204
unprodwd	Pearson Correlation	.098	-.031	-.075	.162*	.034	.556**	.660**	1	.705**	.688**
	Sig. (2-tailed)	.162	.658	.289	.020	.632	.000	.000		.000	.000
	N	204	204	204	204	204	204	204	204	204	204
Unprode	Pearson Correlation	.082	-.012	-.029	-.032	.056	.480**	.581**	.705**	1	.649**
	Sig. (2-tailed)	.243	.863	.679	.647	.430	.000	.000	.000		.000
	N	204	204	204	204	204	204	204	204	204	204
Unprodv	Pearson Correlation	.152*	-.026	-.098	.069	-.167*	.515**	.630**	.688**	.649**	1
	Sig. (2-tailed)	.030	.714	.163	.324	.017	.000	.000	.000	.000	
	N	204	204	204	204	204	204	204	204	204	204

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

		prodf2f	prodt	prodwd	prode	prodv	unprodf2f	unprodt	unprodwd	unprode	unprodv
prodf2f	Pearson Correlation	1	.554**	.176*	.062	.010	-.071	-.048	.098	.082	.152*
	Sig. (2-tailed)		.000	.012	.381	.889	.313	.497	.162	.243	.030
	N	204	204	204	204	204	204	204	204	204	204
Prodt	Pearson Correlation	.554**	1	.304**	.132	.204**	-.084	-.190**	-.031	-.012	-.026
	Sig. (2-tailed)	.000		.000	.059	.003	.233	.006	.658	.863	.714
	N	204	204	204	204	204	204	204	204	204	204
Prodwd	Pearson Correlation	.176*	.304**	1	.272**	.215**	.041	.003	-.075	-.029	-.098
	Sig. (2-tailed)	.012	.000		.000	.002	.561	.967	.289	.679	.163
	N	204	204	204	204	204	204	204	204	204	204
Prode	Pearson Correlation	.062	.132	.272**	1	.439**	.194**	.252**	.162*	-.032	.069
	Sig. (2-tailed)	.381	.059	.000		.000	.005	.000	.020	.647	.324
	N	204	204	204	204	204	204	204	204	204	204
Prodv	Pearson Correlation	.010	.204**	.215**	.439**	1	.113	.084	.034	.056	-.167*
	Sig. (2-tailed)	.889	.003	.002	.000		.107	.233	.632	.430	.017
	N	204	204	204	204	204	204	204	204	204	204
unprodf2f	Pearson Correlation	-.071	-.084	.041	.194**	.113	1	.759**	.556**	.480**	.515**
	Sig. (2-tailed)	.313	.233	.561	.005	.107		.000	.000	.000	.000
	N	204	204	204	204	204	204	204	204	204	204
Unprodt	Pearson Correlation	-.048	-.190**	.003	.252**	.084	.759**	1	.660**	.581**	.630**
	Sig. (2-tailed)	.497	.006	.967	.000	.233	.000		.000	.000	.000
	N	204	204	204	204	204	204	204	204	204	204
unprodwd	Pearson Correlation	.098	-.031	-.075	.162*	.034	.556**	.660**	1	.705**	.688**
	Sig. (2-tailed)	.162	.658	.289	.020	.632	.000	.000		.000	.000
	N	204	204	204	204	204	204	204	204	204	204
Unprode	Pearson Correlation	.082	-.012	-.029	-.032	.056	.480**	.581**	.705**	1	.649**
	Sig. (2-tailed)	.243	.863	.679	.647	.430	.000	.000	.000		.000
	N	204	204	204	204	204	204	204	204	204	204
Unprodv	Pearson Correlation	.152*	-.026	-.098	.069	-.167*	.515**	.630**	.688**	.649**	1
	Sig. (2-tailed)	.030	.714	.163	.324	.017	.000	.000	.000	.000	
	N	204	204	204	204	204	204	204	204	204	204

**. Correlation is significant at the 0.01 level (2-tailed).

Table 7 Descriptive Statistics of Scales

	N	Minimum	Maximum	Mean	Std. Deviation

		prodf2f	prodt	prodwd	prode	prodv	unprodf2f	unprodt	unprodwd	unprode	unprodv
prodf2f	Pearson Correlation	1	.554**	.176*	.062	.010	-.071	-.048	.098	.082	.152*
	Sig. (2-tailed)		.000	.012	.381	.889	.313	.497	.162	.243	.030
	N	204	204	204	204	204	204	204	204	204	204
Prodt	Pearson Correlation	.554**	1	.304**	.132	.204**	-.084	-.190**	-.031	-.012	-.026
	Sig. (2-tailed)	.000		.000	.059	.003	.233	.006	.658	.863	.714
	N	204	204	204	204	204	204	204	204	204	204
Prodwd	Pearson Correlation	.176*	.304**	1	.272**	.215**	.041	.003	-.075	-.029	-.098
	Sig. (2-tailed)	.012	.000		.000	.002	.561	.967	.289	.679	.163
	N	204	204	204	204	204	204	204	204	204	204
Prode	Pearson Correlation	.062	.132	.272**	1	.439**	.194**	.252**	.162*	-.032	.069
	Sig. (2-tailed)	.381	.059	.000		.000	.005	.000	.020	.647	.324
	N	204	204	204	204	204	204	204	204	204	204
Prodv	Pearson Correlation	.010	.204**	.215**	.439**	1	.113	.084	.034	.056	-.167*
	Sig. (2-tailed)	.889	.003	.002	.000		.107	.233	.632	.430	.017
	N	204	204	204	204	204	204	204	204	204	204
unprodf2f	Pearson Correlation	-.071	-.084	.041	.194**	.113	1	.759**	.556**	.480**	.515**
	Sig. (2-tailed)	.313	.233	.561	.005	.107		.000	.000	.000	.000
	N	204	204	204	204	204	204	204	204	204	204
Unprodt	Pearson Correlation	-.048	-.190**	.003	.252**	.084	.759**	1	.660**	.581**	.630**
	Sig. (2-tailed)	.497	.006	.967	.000	.233	.000		.000	.000	.000
	N	204	204	204	204	204	204	204	204	204	204
unprodwd	Pearson Correlation	.098	-.031	-.075	.162*	.034	.556**	.660**	1	.705**	.688**
	Sig. (2-tailed)	.162	.658	.289	.020	.632	.000	.000		.000	.000
	N	204	204	204	204	204	204	204	204	204	204
Unprode	Pearson Correlation	.082	-.012	-.029	-.032	.056	.480**	.581**	.705**	1	.649**
	Sig. (2-tailed)	.243	.863	.679	.647	.430	.000	.000	.000		.000
	N	204	204	204	204	204	204	204	204	204	204
Unprodv	Pearson Correlation	.152*	-.026	-.098	.069	-.167*	.515**	.630**	.688**	.649**	1
	Sig. (2-tailed)	.030	.714	.163	.324	.017	.000	.000	.000	.000	
	N	204	204	204	204	204	204	204	204	204	204

**. Correlation is significant at the 0.01 level (2-tailed).

prodf2f	204	1.00	5.00	3.4945	.76073
Prodt	204	1.00	5.00	3.1103	.72713
prodwd	204	1.00	5.00	3.2623	.70208
Prode	204	1.00	5.00	3.5441	.69805

		prodf2f	prodt	prodwd	prode	prodv	unprodf2f	unprodt	unprodwd	unprode	unprodv
prodf2f	Pearson Correlation	1	.554**	.176*	.062	.010	-.071	-.048	.098	.082	.152*
	Sig. (2-tailed)		.000	.012	.381	.889	.313	.497	.162	.243	.030
	N	204	204	204	204	204	204	204	204	204	204
Prodt	Pearson Correlation	.554**	1	.304**	.132	.204**	-.084	-.190**	-.031	-.012	-.026
	Sig. (2-tailed)	.000		.000	.059	.003	.233	.006	.658	.863	.714
	N	204	204	204	204	204	204	204	204	204	204
Prodwd	Pearson Correlation	.176*	.304**	1	.272**	.215**	.041	.003	-.075	-.029	-.098
	Sig. (2-tailed)	.012	.000		.000	.002	.561	.967	.289	.679	.163
	N	204	204	204	204	204	204	204	204	204	204
Prode	Pearson Correlation	.062	.132	.272**	1	.439**	.194**	.252**	.162*	-.032	.069
	Sig. (2-tailed)	.381	.059	.000		.000	.005	.000	.020	.647	.324
	N	204	204	204	204	204	204	204	204	204	204
Prodv	Pearson Correlation	.010	.204**	.215**	.439**	1	.113	.084	.034	.056	-.167*
	Sig. (2-tailed)	.889	.003	.002	.000		.107	.233	.632	.430	.017
	N	204	204	204	204	204	204	204	204	204	204
unprodf2f	Pearson Correlation	-.071	-.084	.041	.194**	.113	1	.759**	.556**	.480**	.515**
	Sig. (2-tailed)	.313	.233	.561	.005	.107		.000	.000	.000	.000
	N	204	204	204	204	204	204	204	204	204	204
Unprodt	Pearson Correlation	-.048	-.190**	.003	.252**	.084	.759**	1	.660**	.581**	.630**
	Sig. (2-tailed)	.497	.006	.967	.000	.233	.000		.000	.000	.000
	N	204	204	204	204	204	204	204	204	204	204
unprodwd	Pearson Correlation	.098	-.031	-.075	.162*	.034	.556**	.660**	1	.705**	.688**
	Sig. (2-tailed)	.162	.658	.289	.020	.632	.000	.000		.000	.000
	N	204	204	204	204	204	204	204	204	204	204
Unprode	Pearson Correlation	.082	-.012	-.029	-.032	.056	.480**	.581**	.705**	1	.649**
	Sig. (2-tailed)	.243	.863	.679	.647	.430	.000	.000	.000		.000
	N	204	204	204	204	204	204	204	204	204	204
Unprodv	Pearson Correlation	.152*	-.026	-.098	.069	-.167*	.515**	.630**	.688**	.649**	1
	Sig. (2-tailed)	.030	.714	.163	.324	.017	.000	.000	.000	.000	
	N	204	204	204	204	204	204	204	204	204	204

**. Correlation is significant at the 0.01 level (2-tailed).

Prodv	204	1.00	5.00	3.0411	.75903
unprodf2f	204	1.00	6.00	3.8235	.82270
unprodt	204	1.00	6.00	3.8873	.85566
unprodwd	204	1.00	6.00	3.6446	.92094

		prodf2f	prodt	prodwd	prode	prodv	unprodf2f	unprodt	unprodwd	unprode	unprodv
prodf2f	Pearson Correlation	1	.554**	.176*	.062	.010	-.071	-.048	.098	.082	.152*
	Sig. (2-tailed)		.000	.012	.381	.889	.313	.497	.162	.243	.030
	N	204	204	204	204	204	204	204	204	204	204
Prodt	Pearson Correlation	.554**	1	.304**	.132	.204**	-.084	-.190**	-.031	-.012	-.026
	Sig. (2-tailed)	.000		.000	.059	.003	.233	.006	.658	.863	.714
	N	204	204	204	204	204	204	204	204	204	204
Prodwd	Pearson Correlation	.176*	.304**	1	.272**	.215**	.041	.003	-.075	-.029	-.098
	Sig. (2-tailed)	.012	.000		.000	.002	.561	.967	.289	.679	.163
	N	204	204	204	204	204	204	204	204	204	204
Prode	Pearson Correlation	.062	.132	.272**	1	.439**	.194**	.252**	.162*	-.032	.069
	Sig. (2-tailed)	.381	.059	.000		.000	.005	.000	.020	.647	.324
	N	204	204	204	204	204	204	204	204	204	204
Prodv	Pearson Correlation	.010	.204**	.215**	.439**	1	.113	.084	.034	.056	-.167*
	Sig. (2-tailed)	.889	.003	.002	.000		.107	.233	.632	.430	.017
	N	204	204	204	204	204	204	204	204	204	204
unprodf2f	Pearson Correlation	-.071	-.084	.041	.194**	.113	1	.759**	.556**	.480**	.515**
	Sig. (2-tailed)	.313	.233	.561	.005	.107		.000	.000	.000	.000
	N	204	204	204	204	204	204	204	204	204	204
Unprodt	Pearson Correlation	-.048	-.190**	.003	.252**	.084	.759**	1	.660**	.581**	.630**
	Sig. (2-tailed)	.497	.006	.967	.000	.233	.000		.000	.000	.000
	N	204	204	204	204	204	204	204	204	204	204
unprodwd	Pearson Correlation	.098	-.031	-.075	.162*	.034	.556**	.660**	1	.705**	.688**
	Sig. (2-tailed)	.162	.658	.289	.020	.632	.000	.000		.000	.000
	N	204	204	204	204	204	204	204	204	204	204
Unprode	Pearson Correlation	.082	-.012	-.029	-.032	.056	.480**	.581**	.705**	1	.649**
	Sig. (2-tailed)	.243	.863	.679	.647	.430	.000	.000	.000		.000
	N	204	204	204	204	204	204	204	204	204	204
Unprodv	Pearson Correlation	.152*	-.026	-.098	.069	-.167*	.515**	.630**	.688**	.649**	1
	Sig. (2-tailed)	.030	.714	.163	.324	.017	.000	.000	.000	.000	
	N	204	204	204	204	204	204	204	204	204	204

**. Correlation is significant at the 0.01 level (2-tailed).

unprode	204	1.00	6.00	3.6379	.90390
unprodv	204	1.00	6.00	3.7794	.89379
Valid N (listwise)	204				

Data Distribution

Data distribution was analyzed, including a search for outliers and an assessment of normality (see Appendix D for distribution characteristics). The items were measured on five-point and six-point Likert scales, as indicated by the minimum and maximum. No outliers were identified as skewness and kurtosis values fell within the acceptable range of ±2.0 (see Table 8).

Table 8 Skewness and Kurtosis of Scales

		prodf2f	Prodt	prodwd	prode	prodv	unprodf2f	unprodt	unprodwd	unprode	unprodv
N	Valid	204	204	204	204	204	204	204	204	204	204
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		3.4945	3.1103	3.2623	3.5441	3.0411	3.8235	3.8873	3.6446	3.6379	3.7794
Median		3.6250	3.1250	3.2500	3.6250	3.0000	3.9375	3.8750	3.6250	3.7500	3.8750
Std. Deviation		.76073	.72713	.70208	.69805	.75903	.82270	.85566	.92094	.90390	.89379
Variance		.579	.529	.493	.487	.576	.677	.732	.848	.817	.799
Skewness		-.479	-.396	-.416	-.650	-.259	-.512	-.117	.031	-.319	.015
Std. Error of Skewness		.170	.170	.170	.170	.170	.170	.170	.170	.170	.170
Kurtosis		.522	.358	.570	1.576	.484	1.011	1.018	-.035	.255	.307
Std. Error of Kurtosis		.339	.339	.339	.339	.339	.339	.339	.339	.339	.339
Range		4.00	4.00	4.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00

Minimum		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00
Percentiles	25	3.0000	2.6250	2.8750	3.1250	2.6250	3.2500	3.3750	3.0000	3.0000	3.0000
	50	3.6250	3.1250	3.2500	3.6250	3.0000	3.9375	3.8750	3.6250	3.7500	3.8750
	75	4.0000	3.6250	3.7500	4.0000	3.5000	4.3750	4.3438	4.1250	4.0000	4.2188

Hypothesis Testing

Research Question 1. In what ways does age affect generational perceptions of communication from management in today's workforce?

As discussed in Chapter 3, there are two primary research questions. Hypotheses 1-3 tested the first question. This question focused on age cohort preference for receiving certain types of information from management through different communication channels. Hypothesis 1 stated that types of information received from management will affect channel preference across age cohorts. Participants ranked their preferred method of communication channel for each information category. A means analysis was conducted on the responses for each preferred communication channel for each information category. GenTBB and GenXM were analyzed independently. The mean ranking for each communication channel and information category were compared. Both GenTBB and GenXM preferred the same communication channels for each information category. Tables 9 and 10 summarize the mean rankings of preferred communication channels for types of information received from management.

Table 9 GenTBB Mean Rankings of Channel Preference for Type of Information

	Face to-face	Telephone	Written Doc.	Elect. Media	Virtual Media
Private & Confidential	Mean 1.37	Mean 2.95	Mean 2.61	Mean 3.5	Mean 4.52
Routine & Procedural	Mean 3.67	Mean 3.84	Mean 2.43	Mean 1.69	Mean 3.39
Time-sensitive	Mean 2.99	Mean 2.13	Mean 3.81	Mean 2.0	Mean 3.98
Training	Mean 1.9	Mean 4.54	Mean 3.29	Mean 3.45	Mean 2.05
Compensation	Mean 2.87	Mean 4.22	Mean 1.84	Mean 2.36	Mean 3.66

Table 10 GenXM Mean Rankings of Channel Preference for Type of Information

	Face to-face	Telephone	Written Doc.	Elect. Media	Virtual Media
Private & Confidential	Mean 1.41	Mean 2.95	Mean 2.86	Mean 3.32	Mean 4.41
Routine & Procedural	Mean 3.51	Mean 3.64	Mean 2.62	Mean 1.52	Mean 3.64
Time-sensitive	Mean 2.99	Mean 2.08	Mean 3.68	Mean 1.92	Mean 4.21
Training	Mean 1.8	Mean 4.25	Mean 3.53	Mean 3.15	Mean 2.21
Compensation	Mean 2.86	Mean 4.08	Mean 2.05	Mean 2.45	Mean 3.56

Table 11 Most Preferred Communication Channel across Age Cohorts

Most Preferred Communication Channel for Information Category	GenTBB	GenXM
Face-to-face (F2F) for Private & Confidential (PC)	1.37	1.41
Electronic Media (EM) for Routine & Procedural (RP)	1.69	1.52
Electronic Media (EM) for Time-sensitive (TS)	2.00	1.92
Face-to-face (F2F) for Training (TR)	1.90	1.80
Written Document (WD) for Compensation & Benefits (CB)	1.84	2.05

Based upon these two tables, Table 11 reports the mean rankings for the most preferred communication channel for each type of information across generational cohorts. Appendix D has the complete analysis.

Five independent samples *t*-tests were performed for the most preferred communication channel for each information category to determine any significant difference between the generational cohorts. Table 12 reports the results for these tests. The *p*-value was greater than the significance level of .05 for the 2-tailed *t*-tests: F2F for PC t(202) = -.363, *p*= .717); EM for TS t(202)= .527, *p* = .599); EM for RP t(202)= 1.09, *p* = .276); and F2F for TR t(202)= -1.31,

Table 12 Independent Samples *t*-Tests

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Face-to-face /Personal and Confidential	Equal variances assumed	.235	.628	-.363	202	.717	-.042	.116	-.270	.186

	Equal variances not assumed			-.362	179.858	.718	-.042	.116	-.271	.187
Electronic Media /Time Sensitive (EM TS)	Equal variances assumed	.796	.373	.527	202	.599	.082	.156	-.226	.390
	Equal variances not assumed			.536	190.683	.593	.082	.154	-.221	.386
Written Document /Compensation and Benefits (WD CB)	Equal variances assumed	4.218	.041	-1.314	202	.190	-.207	.157	-.517	.103
	Equal variances not assumed			-1.258	150.375	.210	-.207	.164	-.531	.118
Electronic Media /Routine and Procedural (EM RP)	Equal variances assumed	1.015	.315	1.092	202	.276	.171	.157	-.138	.481
	Equal variances not assumed			1.107	189.151	.270	.171	.155	-.134	.477
Face-to-face /Training (F2F TR)	Equal variances assumed	4.218	.041	-1.314	202	.190	-.207	.157	-.517	.103
	Equal variances not assumed			-1.258	150.375	.210	-.207	.164	-.531	.118

p =.190); and WD for CB t(202)= -1.31, *p* = .190. Thus there is no statistical significance between the generational cohorts. Hypothesis 1 is not supported.

Hypothesis 2 stated that older workers (Gen TBB) will prefer "richer" communication channels for receiving all types of information from management, regardless of the message. Two new "rich mean" variables were created to test Hypothesis 2 using the two richest communication channels, face-to-face and telephone. They were named MF2F and MT. These were then transformed and

computed into a final variable, Rich Mean (RM). An ANOVA and general linear model were used to determine if GenTBB preferred richer communication channels than GenXM. The result was not significant (F = .185, *p* = .668). The *p*-value was greater than the significance level of .05, thus there is no statistical significance between the generational cohorts in preference for richer forms of communication channels. Hypothesis 2 is not supported.

Hypothesis 3 stated that younger workers will prefer ”leaner" communication channels for receiving all types of information from management, regardless of the message. Two new “lean mean” variables were created to test Hypothesis 3 using the two leanest communication channels, electronic media and virtual media. They were named MEM and MVM. These were then transformed and computed into a final variable, Lean Mean (LM). An ANOVA and general linear model were used to determine if, in fact, GenXM preferred leaner communication channels than GenTBB. The result was not significant (F = .748, *p* = .388). The *p*-value was greater than the significance level of 0.05, thus there is no statistical significance between the generational cohorts in preference for leaner forms of communication channels. Hypothesis 3 is not supported.

Research Question 2. What are the generational perceptions of productive/unproductive information dissemination in communication processes?

This question focused on age cohort perceptions about receiving productive and unproductive information through particular channel types in

terms of productivity (i.e., productivity tasks, morale, stress, and trust). Hypotheses 4a-d and 5a-d tested the second question.

Productive Information

Five linear regressions were computed with channel productivity as the dependent variable and age cohort as the independent variable to test Hypotheses 4a-d for productive information. Tables for these regressions as well as frequency analysis and further regressions used to test Hypotheses 4a-d can be found in Appendix E.

Productivity levels were computed based upon participant responses to 8 productivity questions (5 task and 3 behavioral components) for receiving productive information through particular channel types. Task components for productivity consisted of productive information received through particular channels that decrease error, decrease delay, make it easier to complete fast paced work, reduce interruptions, and make it easier to complete work tasks. The three behavioral components for productivity consisted of productive information received through particular communication channels that increase morale, increase trust and decrease stress.

Hypothesis 4a stated that productive information received from management through particular channel types will increase productivity levels across age cohorts. Channel productivity for productive information was regressed onto age. The result was significant for face-to-face ($\beta = -.143$, $p < .05$) but not significant for the other four channels: telephone ($\beta = -.124$, $p = .078$);

written document (β = .078, *p* = .268); electronic media (β = .112, *p*= .112); and virtual media (β = -.069, *p* = .326). Therefore, face-to-face is the only communication channel that supports Hypothesis 4a.

Hypothesis 4b stated that productive information received from management through particular channel types will increase morale across age cohorts. A frequency distribution was used to determine which communication channel had the largest number of "strongly agree" responses to an increase in morale for productive information across age cohorts. Table 13 reports that face-to-face had the largest number of "strongly agree" responses across age cohorts.

Table 13 Frequency Distribution for Morale Increase for Productive Information Received through Communication Channels

Channel	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Face-to-face	44	97	37	21	5
Telephone	9	78	77	34	6
Written Document	7	51	103	35	8
Electronic Media	12	58	97	30	7
Virtual Media	3	43	95	50	13

Variable "F2F communication will increase morale" for productive information was regressed onto age to determine if age predicted this channel selection for increase in morale. The result was not significant (β = .089, *p* = .204). The *p*-value was greater than the significance level of .05, thus there is no statistical significance between the generational cohorts. Hypothesis 4b is not supported.

Hypothesis 4c stated that productive information received from management through particular channel types will increase trust across age

cohorts. A frequency distribution was used to determine which communication channel had the largest number of “strongly agree” responses to an increase in trust for productive information across age cohorts. Table 14 reports that face-to-face had the largest number of “strongly agree” responses across age cohorts.

Variable “F2F communication will increase trust” for productive information was regressed onto age to determine if age predicted this channel selection for increase in trust. The result was significant ($\beta = .196$, $p < .05$), thus there is

Table 14 Frequency Distribution for Trust Increase for Productive Information Received through Communication Channels

Channel	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Face-to-face	56	96	34	14	4
Telephone	11	87	72	28	6
Written Document	6	60	102	29	7
Electronic Media	12	59	95	31	7
Virtual Media	5	40	101	48	10

statistical significance between the generational cohorts. Hypothesis 4c is supported.

Lastly, Hypothesis 4d stated that productive information received from management through particular channel types will decrease stress across age cohorts. A frequency distribution was used to determine which communication channel had the largest number of “strongly agree” responses to decrease in

stress for productive information across age cohorts. Table 15 reports that face-to-face had the largest number of 'strongly agree' responses across age cohorts. Variable "F2F communication will decrease stress" for productive information was regressed onto age to determine if age predicted this channel selection for decrease in stress. The result was not significant (β = .121, p = .085). The p-value was greater than the significance level of .05, thus there is no statistical significance between the generational cohorts. Hypothesis 4d is not supported.

Table 15 Frequency Distribution for Stress Decrease for Productive Information Received through Communication Channels

Channel	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Face-to-face	25	59	73	39	8
Telephone	7	50	84	55	8
Written Document	7	52	90	46	9
Electronic Media	16	67	85	30	6
Virtual Media	6	37	102	49	10

Unproductive Information

Five linear regressions were computed with channel productivity as the dependent variable and age cohort as the independent variable to test Hypotheses 5a-d for unproductive information. Tables for these regressions as well as frequency analysis and further regressions used to test Hypotheses 5a-d can be found in Appendix G.

Productivity levels were computed based upon participant responses to 8 productivity questions (5 task and 3 behavioral components) for receiving unproductive information through particular channel types. Task components for productivity consisted of unproductive information received through particular channels that increase error, increase delay, make it harder to complete fast paced work, increase interruptions, and make it harder to complete work tasks. The three behavioral components for productivity consisted of unproductive information received through particular communication channels that decrease morale, decrease trust and increase stress.

Hypothesis 5a stated that unproductive information received from management through particular channels will decrease productivity levels across age cohorts. Channel productivity for unproductive information was regressed onto age. The result was not significant: face-to-face (β = -.020, p = .780); telephone (β = -.001, p = .985); written document (β = -.031 p = .657); electronic media (β = -.070, p = .320); and virtual media (β = -.018, p = .795). The p-value was greater than the significance level of .05, thus there is no statistical significance between the generational cohorts. Hypothesis 5a is not supported.

Hypothesis 5b stated that unproductive information received from management through particular channel types will decrease morale across age cohorts. A frequency distribution was used to determine which communication channel had the largest number of “strongly agree” responses to decrease in morale for unproductive information across age cohorts. Table 16 reports that

face-to-face had the largest number of “strongly agree” responses across age cohorts.

Variable “F2F communication will decrease morale” for unproductive information was regressed onto age to determine if age predicted this channel selection for decrease in morale. The result was not significant (β = -.065, *p* = .356). The *p*-value was greater than the significance level of .05, thus there is no statistical significance between the generational cohorts. Hypothesis 5b is not supported.

Table 16 Frequency Distribution for Morale Decrease for Unproductive Information Received through Communication Channels

Channel	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A in our org
Face-to-face	54	70	51	21	5	3
Telephone	42	64	71	15	5	7
Written Document	39	58	78	23	3	3
Electronic Media	36	69	69	23	6	1
Virtual Media	40	62	74	19	4	5

Hypothesis 5c stated that unproductive information received from management through particular channels will decrease trust across age cohorts. A frequency distribution was used to determine which communication channel had the largest number of “strongly agree” responses to decrease in trust for unproductive information across age cohorts. Table 17 reports that face-to-face had the largest number of “strongly agree” responses across age cohorts.

Variable “F2F communication will decrease trust” for unproductive information was regressed onto age to determine if age predicted this channel selection for decrease in trust. The result was not significant (β = -.017, p = .813. The p-value was greater than the significance level of .05, thus there is no statistical significance between the generational cohorts. Hypothesis 5c is not supported.

Hypothesis 5d stated that unproductive information received from management through particular channels will increase stress across age cohorts. A frequency distribution was computed to determine which communication

Table 17 Frequency Distribution for Trust Decrease for Unproductive Information Received through Communication Channels

Channel	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A in our org
Face-to-face	44	63	62	26	6	3
Telephone	37	57	77	22	4	7
Written Document	43	52	81	23	2	3
Electronic Media	37	51	84	24	7	1
Virtual Media	41	62	77	15	4	5

Table 18 Frequency Distribution for Stress Increase for Unproductive Information Received through Communication Channels

Channel	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
F2F	71	63	52	10	4	4
T	56	80	49	10	2	7
WD	45	69	68	16	3	3
EM	47	73	56	21	5	2
VM	47	77	59	10	4	7

channel had the largest number of “strongly agree” responses to increase in stress for unproductive information across age cohorts. Table 18 reports that face-to-face had the largest number of “strongly agree” responses across age cohorts.

Variable “F2F communication will increase stress” for unproductive information was regressed onto age to determine if age predicted this channel selection for increase in stress. The result was not significant (β = -.057, p = .415). The p-value was greater than the significance level of .05, thus there is no statistical significance between the generational cohorts. Hypothesis 5d is not supported.

Content Analysis

The results of the content analysis from the open-ended question asked at the end of the survey are presented here. While only 14 comments were made, the comments provide insight about some of the quantitative results. Generational cohorts were very clear on the perceived appropriateness of a communication channel with the message being sent. For example, cohorts noted the importance of face-to-face communication for questions they did not feel comfortable asking through other channels: “Face-to-face allows for questions you do not ask when other methods are employed.” “An important part of communicating is the listening process.” “I do like Centra as far as travel dollars go, especially for routine matters. Face-to-face is better if bigger changes are required.” Finally, exploring different types of face-to-face interactions in

Extension was recommended: “Our agency also uses in-service trainings and group meetings. They may be variables that would need to be explored for future studies.”

Generational cohorts discussed concerns about the use of electronic mail more than any other communication channel. One of their main concerns dealt with the quantity of e-mail directed to all extension agents rather than to targeted groups. For example, several comments suggested that sending messages that targeted particular groups would be more productive: “We get too much e-mail directed to all. If it doesn't pertain to me, it shouldn't be sent to me. I like e-mail, but I don't like getting e-mails that are not intended for me.” “Receiving large e-mail attachments that clog up my inbox are extremely bothersome. Especially when they come from people at the state office and they do not relate to my job at all.”

Comments also reflected the time consuming nature of receiving these e-mails: “E-mail would not be so time consuming if we were not inundated with so many internal messages addressed to ‘All Extension Agents.’ E-mail could be much more productive if messages were targeted to the appropriate groups—for example, 4-H, Ag, FCS, Eastern Region, Central Region, and Western Region.” “If people don't have the correct grouping and they send e-mails—that can be disruptive. If the subject is general, you may not know whether to open the document or not. People sending huge attachments—that slows computers or causes the computer to freeze, [which] is a disruptive way of using e-mail.”

Finally, the impact of short deadlines communicated through e-mail and the fast work pace was another concern: "…e-mails from superiors with very short turnaround times (which happen routinely) just make the problems worse [morale]." "With our pace we always have stress."

Cohorts recognized the benefits of e-mail for their work: "E-mail is a great tool if used properly. I believe work e-mail should be for work related issues only and forwarded/sent to relevant employees. Most letters could be substituted via e-mail. E-mail allows you to work around the clock, [you can] check or send messages or documents late at night, weekends, or during informal working hours. However, e-mail can be abused and overwhelming if not used efficiently for me."

Suggestions for improving Extension websites were also made: "We need to work on our websites. FCS site needs to be linked to main Extension site. Region and county sites should be clientele/user friendly. I do appreciate the FCS agent resources being password protected. Self-paced, web-based learning modules, similar to the Oregon State University Extension, would be a good addition to sites."

CHAPTER V: CONCLUSIONS

The purpose of the study was to determine generational preferences for communication channels based upon the types of information received from management and generational perceptions of perceived productive/unproductive information that impact task and behavioral productivity.

The study was driven by two overarching research questions and all findings are discussed as they relate to these questions:

1. *In what ways does age affect generational perceptions of communication from management in today's workforce?*
2. *What are the generational perceptions of productive/unproductive information dissemination in communication processes?*

Discussion

As stated in Chapter 3, the study's instrument draws largely from the International Communication Association (ICA) Audit. It was critical to use this audit as the foundation of the study's instrument due to its communication relevancy and record of strong reliability. The only topic area that diverged from the ICA Audit, which allows organizational freedom in design, was the addition of productivity issues. The original audit utilizes an organizational outcomes measure that looks specifically at job satisfaction. Outcomes for this instrument were combined with personal constructs of worker productivity identified in the prior qualitative and quantitative research of Kupritz and Cowell (in press) and Kupritz (2005). These studies were used to help define and design productivity outcomes. Also, participants from the pilot study provided their personal constructs for two additional terms used in the instrument, "management" and "unproductive," which further helped to define and design productivity outcomes. Reliability was measured for all productivity items against the communication channels resulting in coefficient alphas of .903-.955. These are not only high coefficient alphas, they are consistent with ICA Audit's .90 high alphas that have

occurred over time. With reliability equal to its history, the instrument appears sound and the development and introduction of productivity outcome measures have strength congruent to those of the initial ICA Audit.

The instrument was also checked for outliers and assessed for normality. Although skewness and kurtosis "are not commonly used in social sciences" (Howell, 2002, p.29), a kurtosis and skewness parametric value of ±1 is considered very good and ±2 is also acceptable. Both values fell within the acceptable range of ±2, while most fell within the ±1 range.

Question 1: In what ways does age affect generational perceptions of communication from management in today's workforce?

Although empirical examination of generational workforce issues is relatively new to Human Resources, the initial message of the HR literature is the need to accommodate differences in the generations. The first study to empirically examine how organizational demography and its shift affected the transfer of information was conducted in 1989 by Zenger and Lawrence. The 1989 study examined technical communication among scientists and engineers. There has been a slow trend to empirically test the need to accommodate generational differences from every angle. Examples include dissemination of learning online to generational cohorts (Stapleton et. al, 2007), flexibility and engagement of workers (Pitt-Catsouphes & Matz-Costa, 2008), and communication media choice (Murray & Peyrefitte, 2007). Although Murray and Peyrefitte did not specifically examine generational cohorts, they addressed the

importance of information dissemination in media and knowledge transfer, which is a key finding in the present study.

HR practice, on the other hand, has exploded with a plethora of industry practice and policy journals (e.g., *HR Focus*, 2007; *Information Management*, 2009; *Employee Relations Today*, 2004, 2010) that provide anecdotal evidence of differences and potential conflicts that may arise from a multigenerational workforce. Clearly the Society for Human Resource Management (SHRM) is continually pulse-checking for generational differences (2004, 2007). No industry is untouched and those from public relations (Van Dyke, Haynes & Ferguson (2007) to banking to internal auditing (McDonald, 2008) and issue reports on how to operationalize their practices accommodating any and all generational differences.

This primary school of thought was the driver for the examination of the first research question. Simons (2010) emphasizes two major points in relation to generational differences: information management and use of technology. The focus of the study's first question deals directly with the types of information received from management through different communication channels. The findings determined that both The Traditionalist and the Baby Boomer generations (GenTBB) and Generation X and Millennials (GenXM) preferred the same communication channel for each information category.

Face-to-face communication was preferred by both generational cohorts for receiving private and confidential information and for training. Media was

preferred by both generations for routine and procedural and time-sensitive information. Lastly, the analysis revealed that written documents were the preferred method of both generational cohorts for compensation and benefits.

Qualitative comments in the present study further support these findings. For example, study participants from both age cohorts were very sensitive to the cues that face-to-face communication allows in the ability to ask questions and get immediate feedback. Face-to-face communication was important to them for questions they did not feel comfortable asking through other channels. They talked about the benefits of being able to discuss and clarify issues in person when large changes are made (to a program, etc) and appeared to recognize the importance of listening that face-to-face enables in the communication process. Participants also pointed out that they liked Centra, a virtual meeting tool, for routine matters (and that it helped to save travel dollars). Although generational perceptions were not measured by Kupritz and Cowell (in press), their qualitative study also revealed that workers preferred face-to-face communication for confidential matters and virtual media to communicate routine and procedural and time-sensitive information.

The findings contradict the anecdotal evidence of widespread differences among the generations and suggest that channel preference for the types of information received from management appears to depend upon a channel's perceived richness (MRT) and its immediacy and intimacy (SPT) rather than age. As stated earlier, the richest forms of media are those that provide the highest

availability of communication cues and establish social presence (see Daft & Lengel, 1984; Daft, Lengel, & Trevino, 1987; and Short, Williams, & Christie, 1976). The “richest” channels of communication are face-to-face and telephone. Conversely, the “leanest” channels of communication are e-mail and written documents. The study findings and the qualitative comments support the need to maintain “richer” forms of communication for certain tasks and in certain contexts, regardless of generation.

MRT’s expansion of burgeoning technology coupled with SPT’s experienced salience and cue systems address situational determinants (such as privacy needs) may also impact employee preference for face-to-face communication in confidential or sensitive matters. The potential for human error in e-mail security risks may be an employee concern when private matters are communicated (Adams, Scheuing, & Feeley, 2000; Hellman, 1999).

Lastly, the findings shed further light on the preferred use of technology by both generational cohorts for certain types of information (routine and procedural and time sensitive). GenTBB’s perceptions of technology in this study as value-added contradict industry concerns about the need to “…avoid using technology as their only communication outlets with older generations” (Jacobson, 2007, p.22).The large number of comments by study participants expressing their concerns about the quantity of e-mail (directed to all rather than to targeted groups) reflects the growing concern about the potential misuse of e-mail (which

by the study's literature review, one would think the younger generation would prefer as it is "leaner.")

Technologies can be useful time-management tools that can enhance productivity when they are properly managed (see, for example, Flora & Miles, 2003; Wasson, 2004). Misunderstandings about these technologies, however, can negatively impact an organization's bottom line. Kupritz and Cowell (in press) caution that the same technologies that allow information on demand, hold reservoirs of shared knowledge, and enable real-time communication to occur globally (McAteer, 1994) have also contributed to constant multi-tasking (Caroli & Van Reenen, 2001; Wasson, 2004) including multicommunicating (Rennecker, Dennis, & Hansen, 2006; Turner & Reinsch, 2007), and a workplace filled with interruptions (Brill, Weidemann, & BOSTI Associates, 2001)

The greatest finding of this study may be that we are concentrating so much on generational differences of channel usage that we have missed the bigger picture. It does not appear to be about the channel but about the message. Information dissemination is the key—what information category organizations are trying to relay to their workers and not necessarily the channel used for the communication chosen for the target audience based upon generational cohort alone. Indeed, the importance of information dissemination in media and knowledge transfer at large has been widely documented. (See, for example, Bogomolny, 2006; Brooks, Kimble, & Hildreth, 2001; Daft & Lengel, 1984; De Vries, Van Den Hoof, & De Ridder, 2006; Fulk, Schmitz, & Steinfeld,

1990; Lee, 1994; Markus, 1994; Ngwenyama & Lee, 1998; Nowak, Watt, & Walther, 2004; Rice & Shook, 1990; Short, Williams, & Christie, 1976; and Daft, & Lengel, & Trevino 1987.)

Question 2: What are the generational perceptions of productive/unproductive information dissemination in communication processes?

The second research question examined age cohort perceptions about productive and unproductive information received from management through particular channels in terms of productivity (5 tasks and 3 behavioral components). As stated earlier, the 5 task components were decrease/increase in error, decrease/increase in delay, make it easier/harder to complete fast paced work, reduce/increase interruptions, and make it easier/harder to complete work tasks. The three behavioral components were increase/decrease in morale, increase/decrease in trust and decrease/increase in stress.

Task Productivity for Productive Information

The findings determined that age predicted a perceived increase in productivity tasks for production information received face-to-face from management, but did not predict a perceived increase in productivity tasks for the other communication channels. Both age cohorts agreed/strongly agreed that face-to-face communication increases productivity tasks, but GenTBB agreed/strongly agreed to a greater extent. The positive responses given here by both age cohorts may at least partially reflect the importance they gave to face-to-face communication

for receiving private and confidential information and for training (Hypothesis 1 was not supported).

It may be that GenTBB is more sensitive to environmental conditions (e.g., visual and acoustical distractions) than GenXM when performing job tasks. For example, Kupritz and Hillsman (in press) determined that attributes of the physical environment can facilitate as well as impede supervisory communication skills transfer. As noted, age was not a predictor in the perceived increase of productivity for the other four communication channels. Generational perceptions of these leaner communication channels as having less immediacy and social presence may contribute to this finding.

Morale, Trust and Stress Productivity for Productive Information

The findings determined that both generational cohorts perceive productive information received face-to-face from management to increase morale and decrease stress. We are reminded that Organizational Justice theory addresses the manner of fairness in exchanges and interactions in organizations. Clearly, morale, trust and stress fall under this umbrella as behavioral and relational constructs. Morale can be a byproduct of trust building. Lesley Brewer (*Manager*, 2010) states “You need to bond with your staff, get to know them and build that relationship of trust so that you can have a happy workforce working productively for the good of the company” (p. 30). Bonding infers social presence as well as rich channels of communication. The face-to-face shared context of

the moment can dilute the stress, thus increasing morale. This is not a generational difference as all cohorts desire this equivocality.

The cohorts differ, however, on the increase of trust as a result of receiving productive information face-to-face. The answer may lie in part by the autonomous nature of either GenXM or the autonomy of field agents in the sample or the combination. By nature, field agents work alone and touch base with the office and their managers and occasionally come together for large projects. There is an inherent trust component built into their daily tasks. It is much the same for GenXM, who are used to taking a task and completing it in self-directed work groups or individually. The increase in face-to-face may seem like an intrusion or usurping of their authority and autonomy.

Task Productivity for Unproductive Information

The findings determined that both generational cohorts perceive unproductive information received from management through all communication channels to negatively impact productivity tasks. The findings indicate that unproductive information—no matter the communication channel—may lead to decreased productivity regardless of age cohort. The findings may have occurred because unproductive information is just that—unproductive. It is viewed as an interruption to the work cycle. Content analysis of participant responses further corroborated this finding. Generational cohorts were most emphatic about the interruption of ubiquitous or irrelevant e-mails as the greatest source of frustration.

Morale, Trust and Stress Productivity for Unproductive Information

The findings determined that both generational cohorts perceive unproductive information received face-to-face from management to negatively impact morale, trust and stress.

The findings suggest that the perceived level of social presence (SPT) and immediacy (MRT) present in face-to-face may intensify the negative impact that unproductive information has on morale, stress and trust, regardless of age cohort. Perceived fairness of interaction (IJT) may be decreased in this situation, such as "Why waste my time with this face-to-face when you could have…." The findings reveal key ties with prior findings of this study that the message and information is the key and suggest that there is a time and place when channel of delivery is critical.

Managerial Implications

The managerial implications of the study are numerous to Human Resource practice and policy for both HRD and HRM. First and foremost is the common ground that GenTBB and GenXM appear to share in their perceptions about information dissemination received from management through different communication channels and its impact on productivity. Human Resource (HR) professionals are inundated with information and literature stressing wide spread differences between generational cohorts. The present study findings do not support this generalization. The prevailing thought that HR should design, tailor

and implement communication processes and programs toward specific generations to maximize efficiency overlooks generational perceptions about the powerful role of the message that is communicated and its delivery channel. The study's preference findings suggest that the communication channel and information category are *not* two mutually exclusive entities for generational cohorts. Rather, HR professionals need to address the channel and the type of information simultaneously to set the importance and choice of delivery:

> Information technology plays a critical role in the management of information in organizations. However, having said that, it should be understood that IT is a medium upon which the information is housed, accessed, retrieved, distributed, and used, and NOT the primary entity that is being managed" (Detlor, 2010, p. 105).

These findings alert and help direct organizations on where to place their finite resources for a multigenerational workforce. Previously budgeted resources for many HRD and HRM interventions that are supposedly targeting generational differences in channel usage can be transferred to programs that target the message and its channel delivery.

The study validates that for some information categories, regardless of age cohort, face-to-face is still the preferred method for attaining the information. Argenti (2003) stresses that "Today's employees do want high-tech and sophisticated communications, but they also want personal contact [face-to-face] with their managers. Understanding this fact is the cornerstone of an effective

internal communication system" (139). As progressive and prolific as electronic and virtual communication have become, personal and confidential information is still preferred face-to-face.

We are programmed to pick up on the non-verbal cues from this richer form of communication (e.g., body language, facial expressions, eye contact, inflexion and intonation of voice). Social presence and richness of communication is "…a result of tens of thousands of years communicating in a face-to-face manner. We have, in effect, optimized our biological apparatus to communicate this way" (Winger, 2005, p. 252). Indeed, *Fortune* noted that the best managers spend up to 40% in face-to-face encounters with employees (Denton, 2006).

The preference for face-to-face communication by generational cohorts for workforce training in this study is contrary to industry practice. Training and development interventions are largely interactive DVD or computer programs or they are outsourced. The implications of this shift in delivery can have profound implications for HR and the organization itself. The residual effect on an organization's bottom line due in part to training that is viewed by the employee as impersonal and non contractual (in the case of outsourcing) could be devastating. Clearly if the industry continues to choose virtual channels for delivery of training, metrics need to be established to verify organizational outcomes are being met by such practice.

The study also validated that written documents (across age cohorts) were the preferred method for receiving compensation and benefits information, followed by electronic media and face-to-face. In a study conducted by UK Workplace 2009, Sarah Coles reports that 78% of companies communicate pensions via written document, followed by face-to face follow-up at 62% and access to information at 18% (2010). These preferences are actually the practice, at least in the UK.

The effect of productive and unproductive information on productivity received from management through different channels is a critical element for HR practitioners to strategize in their programs as they train and develop management staff. Training and development interventions should incorporate action plans that address how to use productive information to positively impact productivity through all channels as well as how unproductive information may negatively impact the bottom line, regardless of the generation.

The study also determined that both generational cohorts strongly agreed face-to-face communication had the greatest impact on morale, trust and stress—whether the information received was productive or unproductive. This finding may reflect the nature of the organizational structure where many of the field agents have little face-to-face interaction with their supervisors. Perhaps this is the desire of the agents rather than the system they are a part of. It is important for organizations and HR professionals to examine the congruence of

their structure to the desired outcomes and build a communication plan based upon their goals for increased productivity.

As the workplace and workforce change with a decrease in GenTBB and an increase in the Net generation, HR practitioners and organizations should strategize on how to accommodate Net Generation (a subset of Millennials) perceptions of communication channels and the distribution of productive and unproductive information. These are our future workers who have yet to enter the workforce or have just entered the workforce in the past five years. They will come in with unprecedented digital prowess, which may decrease the current level of GenTBB and GenXM need for face-to-face interaction (Winger, 2005). Their nature has been electronic and virtual worlds.

The study's ultimate goal was to inform research that in turn could be used to inform HR practice and policy about differences in generational perceptions of information dissemination and channel usage. The findings did not support differences but rather revealed common ground shared between age cohorts. In chapter 3, it is noted that regardless of generation, all want respect. This holds true for morale, trust and stress as well. Age cohorts appear to desire information dissemination through delivery systems that ensure productivity, regardless of the message and want a system that builds morale and trust and decreases the stresses of the job. Getting the right mix between communication channel and the information to be disseminated nets an organization not only gains in productivity and profitability, but retention of dedicated employees (Gillis, 2007).

Limitations

There are several limitations to this study. This is the first study of its kind; therefore there are no prior benchmarking studies to compare the results to. The study also introduces a new instrument, which appears to be reliable, but should be tested in other studies. The sample itself was within one organization, and although it met all of the qualifying criteria (multiple generations, multiple channels of communication used) the strength of the study may have increased with sampling across organizations, thus increasing the *n* of responses as well as a greater distribution of generational cohorts. (For example, the sample population used in the present study had an $n = 7$ for the Net Generation.) With more Netgeners entering the workforce in the near future, longitudinal use of the instrument is recommended as this pool of primarily tech driven workers develop tenure in the job greater than five years and more GenTBB retire.

The survey, administered online, is a self-report survey of preferences and perceived productive and unproductive measures. Future researchers may want to devise a random log-in to allow the identification of non-responders to activate additional reminders or include a non-response field.

Future Research

The dissertation contributes to the literature by being the first study to empirically examine the relationship between age cohorts, communication channel preferences, information categories, and productivity. Empirical

examination of generational workforce issues is relatively new to Human Resources and research is needed to further examine generational perceptions—not only regarding the present study topic but generational topics at large. Study findings suggest that another important question for future research should examine potential multicollinearity amongst the productivity scales.

Although study predictions of the regressions were sound, initial bivariate correlations were also conducted to investigate if any patterns immerged between the task variables and the behavioral variables. Results showed that there is a pattern, which goes against the conventional literature. Future research should investigate the relationship between the task and behavioral variables through structural equation modeling (SEM). This will add a depth to the study by examining how productivity is affected not only by communication channels, but between the task dimensions and the effect on morale, trust and stress.

Replication of this study is needed to broaden the generalizability of the findings to larger populations across organizations. As well, longitudinal use of this instrument will provide a snapshot of the changing landscape of the workforce as GenTBB are replaced by GenXM and beyond. It will also allow for testing the notion that Media Richness Theory could be replaced by emerging theories that have a leaner focus at the core.

Final Remarks

From the onset, the primary purpose of this dissertation was to empirically test communication channel preferences of generational cohorts. The secondary purpose was to empirically test if age affected worker productivity for productive and unproductive information received from management through different communication channels.

Although it is imperative to acknowledge characteristic differences of the generations, discussed in detail in Chapter 3, it appears that it is time to stop walking on tender hooks around and between generational cohorts. This dissertation begins to open dialogue that the supposed differences inherent in the multigenerational workforce may not be as much a factor of the generation as the information. The development of the new instrument in this study provides a new tool to examine organizations preferences and productivity. With additional research and new generations entering the workforce, practitioners and researchers alike will contribute to the growth of the knowledgebase that was planted by this dissertation.

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APPENDICES

APPENDIX A

Survey Instrument-Communication Channel Preferences and Productivity Survey

Thank you for participating in this survey on communication channel preferences and productivity. INSTRUCTIONS: This survey lists communication channels and types of information received from management through these channels. The communication channels listed are: Face-to-Face Telephone Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards) Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet) Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD) The types of information listed are: Private and Confidential (including evaluations, performance reviews) Routine and Procedural (Standard Operating Procedures) Time-sensitive (emergency situations, tasks with immediate urgency, tasks with shortened deadlines) Training (initial on-the-job training, subsequent training, workshops, modules and orientation) Compensation and Benefits (plan selection, changes in compensation and benefits packages, new offerings) The word 'productive' in this survey means one or more of the following: producing; completing a job or task in a productive manner; to move forward; doing your job in a competent, efficient and accurate manner; to effectively use time and resources that are available to complete a desired task in the shortest time possible; to do quality work in a timely manner; generating work in a successful and timely way; and completing a task in an efficient amount of time. The word "unproductive" in this survey means one or more of the following: waste of time; not relevant to my job; does not add anything to my job; of no value to my job; and does not make my job more productive or effective. The word 'management' in this survey means your immediate supervisor or one level up, whoever is responsible for the primary delegation of tasks and workload to you. Completion of the survey will require 10-15 minutes. Your participation is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled, and you may discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. Submission of your survey constitutes your consent to participate. Your responses are completely anonymous. The completed surveys will be stored in a locked file on the University of Tennessee server until the research project is completed; after completion of the project, the data will be disposed of following UT research protocol. The surveys will never be shared with your organization or any of its representatives. Results will be summarized so that no personal or individual answers can be identified. Thank you for your participation.

I was born in the year _____

What is your gender?

☐ Male

- [ ] Female

What is your ethnicity?

- [ ] Caucasian
- [ ] African American
- [ ] Native American
- [ ] Asian
- [ ] Hispanic/Latino
- [ ] Other

Please select any and all Titles that apply to your position.

- [ ] County Director
- [ ] Agent

Please select any and all Program Responsibilities that apply to your position.

- [ ] Agriculture
- [ ] Family and Consumer Sciences
- [ ] Community Resource Development
- [ ] 4-H Youth Development

I work primarily in a _____ geographic area.

- [ ] Rural
- [ ] Suburban
- [ ] Urban

Please rank order (from 1-most preferred to 5-least preferred) your preference for receiving ***Private and Confidential*** information (including evaluations, performance reviews) from management. Put a "1" in the box for your **most preferred** communication channel for receiving this category of information and proceed to rank the other four communication channels until you have utilized 2, 3, 4, and 5 (least preferred).

	Face-to-Face	Telephone	Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)
Private and Confidential Information					

Please rank order (from 1-most preferred to 5-least preferred) your preference for receiving ***Routine and Procedural*** information (Standard Operating Procedures) from management. Put a "1" in the box for your **most preferred** communication channel for receiving this category of information and proceed to rank the other four communication channels until you have utilized 2, 3, 4, and 5 (least preferred).

	Face-to-Face	Telephone	Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD
Routine and Procedural Information					

Please rank order (from 1-most preferred to 5-least preferred) your preference for receiving ***Time-Sensitive*** information (emergency situations, tasks with immediate urgency, tasks with shortened deadlines) from management. Put a "1" in the box for your **most preferred** communication channel for receiving this category of information and proceed to rank the other four communication channels until you have utilized 2, 3, 4, and 5 (least preferred).

	Face-to-Face	Telephone	Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)
Time-Sensitive Information					

Please rank order (from 1-most preferred to 5-least preferred) your preference for receiving ***Training*** information (initial on-the-job training, subsequent training, workshops, modules and orientation) from management. Put a "1" in the box for your **most preferred** communication channel for receiving this category of information and proceed to rank the other four communication channels until you have utilized 2, 3, 4, and 5 (least preferred).

	Face-to-Face	Telephone	Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)
Training Information					

Please rank order (from 1-most preferred to 5-least preferred) your preference for receiving ***Compensation and Benefits*** information (plan selection, changes in compensation and benefits packages, new offerings) from management. Put a "1" in the box for your **most preferred** communication channel for receiving this category of information and proceed to rank the other four communication channels until you have utilized 2, 3, 4, and 5 (least preferred).

	Face-to-Face	Telephone	Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)
Compensation and Benefits Information					

You will be presented with screens that ask questions about the level of productivity of each communication channel in relation to the category of information received from management. For each question please select whether you feel that the channel type and information category received are Very Productive, Productive, Neither Productive or Unproductive, Unproductive or Very Unproductive to your workday. The word 'management' in this survey means your immediate supervisor or one level up, whoever is responsible for the primary delegation of tasks and workload to you. The word 'productive' in this survey means one or more of the following: producing; completing a job or task in a productive manner; to move forward; doing your job in a competent, efficient and accurate manner; to effectively use time and resources that are available to complete a desired task in the shortest time possible; to do quality work in a timely manner; generating work in a successful and timely way; and completing a task in an efficient amount of time. The word "unproductive" in this survey means one or more of the following: waste of time; not relevant to my job; does not add anything to my job; of no value to my job; and does not make my job more productive or effective.

Face-to-Face Communication received from management

	Very Productive	Productive	Neither Productive or Unproductive	Unproductive	Very Unproductive
Private, confidential information (evaluations, raises, terminations) received from management face-to-face is:	☐	☐	☐	☐	☐
Routine and procedural information (Standard Operating Procedures) received from management face-to-face is:	☐	☐	☐	☐	☐
Time sensitive information received from management face-to-face is:	☐	☐	☐	☐	☐
Training presentation information (workshops, modules and orientation) received from management face-to-face is:	☐	☐	☐	☐	☐
Compensation and benefits information received from management face-to-face is:	☐	☐	☐	☐	☐

Telephone Communication received from management

	Very Productive	Productive	Neither Productive or Unproductive	Unproductive	Very Unproductive
Private, confidential information (evaluations, raises, terminations) received from management by telephone is:	☐	☐	☐	☐	☐
Routine and procedural information (Standard Operating Procedures) received from management by telephone is:	☐	☐	☐	☐	☐
Time sensitive information received from management by telephone is:	☐	☐	☐	☐	☐
Training presentation information (workshops, modules and orientation) received from management by telephone is:	☐	☐	☐	☐	☐
Compensation and benefits information received from management by telephone is:	☐	☐	☐	☐	☐

Written Document Communication (memos, letters, newsletters, manuals, instructions, bulletin boards) received from management

	Very Productive	Productive	Neither Productive or Unproductive	Unproductive	Very Unproductive
Private, confidential information (evaluations, raises, terminations) received from management as a written document is:	C	C	C	C	C
Routine and procedural information (Standard Operating Procedures) received from management as a written document is:	C	C	C	C	C
Time sensitive information received from management as a written document is:	C	C	C	C	C
Training presentation information (workshops, modules and orientation) received from management as a written document is:	C	C	C	C	C
Compensation and benefits information received from management as a written document is:	C	C	C	C	C

Electronic Media Communication (e-mail, text, Blackberry, IM, Internet, Intranet) received from management

	Very Productive	Productive	Neither Productive or Unproductive	Unproductive	Very Unproductive
Private, confidential information (evaluations, raises, terminations) received from management by electronic media is:	☐	☐	☐	☐	☐
Routine and procedural information (Standard Operating Procedures) received from management by electronic media is:	☐	☐	☐	☐	☐
Time sensitive information received from management by electronic media is:	☐	☐	☐	☐	☐
Training presentation information (workshops, modules and orientation) received from management by electronic media is:	☐	☐	☐	☐	☐
Compensation and benefits information received from management by electronic media is:	☐	☐	☐	☐	☐

Virtual Media Communication (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD) received from management

	Very Productive	Productive	Neither Productive or Unproductive	Unproductive	Very Unproductive
Private, confidential information (evaluations, raises, terminations) received from management virtually is:	☐	☐	☐	☐	☐
Routine and procedural information (Standard Operating Procedures) received from management virtually is:	☐	☐	☐	☐	☐
Time sensitive information received from management virtually is:	☐	☐	☐	☐	☐
Training presentation information (workshops, modules and orientation) received from management virtually is:	☐	☐	☐	☐	☐
Compensation and benefits information received from management virtually is:	☐	☐	☐	☐	☐

The next questions address the degree to which you feel "productive" information received from management through each communication channel affects your productivity. For each question please select the degree (strongly disagree, disagree, not applicable, agree, strongly agree) that represents the effect of the information by channel on your day or your perception of your job. The word 'productive' in this survey means one or more of the following: producing; completing a job or task in a productive manner; to move forward; doing your job in a competent, efficient and accurate manner; to effectively use time and resources that are available to complete a desired task in the shortest time possible; to do quality work in a timely manner; generating work in a successful and timely way; and completing a task in an efficient amount of time. The word 'management' in this survey means your immediate supervisor or one level up, whoever is responsible for the primary delegation of tasks and workload to you.

Routinely receiving **productive** information **face-to-face** from management…

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Decreases work error	☐	☐	☐	☐	☐
Decreases work delays	☐	☐	☐	☐	☐
Makes it easier to keep up with fast paced work	☐	☐	☐	☐	☐
Reduces interruptions	☐	☐	☐	☐	☐
Makes it easier to complete work tasks	☐	☐	☐	☐	☐
Increases morale	☐	☐	☐	☐	☐
Increases trust	☐	☐	☐	☐	☐
Reduces stress	☐	☐	☐	☐	☐

Routinely receiving **productive** information by **telephone** from management…

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Decreases work error	☐	☐	☐	☐	☐
Decreases work delays	☐	☐	☐	☐	☐
Makes it easier to keep up with fast paced work	☐	☐	☐	☐	☐
Reduces interruptions	☐	☐	☐	☐	☐
Makes it easier to complete work tasks	☐	☐	☐	☐	☐
Increases morale	☐	☐	☐	☐	☐
Increases trust	☐	☐	☐	☐	☐
Reduces stress	☐	☐	☐	☐	☐

Routinely receiving **productive** information by **written documents** (memos, letters, newsletters, manuals, instructions, bulletin boards) from management…

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Decreases work error	☐	☐	☐	☐	☐
Decreases work delays	☐	☐	☐	☐	☐
Makes it easier to keep up with fast paced work	☐	☐	☐	☐	☐
Reduces interruptions	☐	☐	☐	☐	☐
Makes it easier to complete work tasks	☐	☐	☐	☐	☐
Increases morale	☐	☐	☐	☐	☐
Increases trust	☐	☐	☐	☐	☐
Reduces stress	☐	☐	☐	☐	☐

Routinely receiving **productive** information by **electronic media** (e-mail, text, Blackberry, I-M, Internet, Intranet) from management…

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Decreases work error	☐	☐	☐	☐	☐
Decreases work delays	☐	☐	☐	☐	☐
Makes it easier to keep up with fast paced work	☐	☐	☐	☐	☐
Reduces interruptions	☐	☐	☐	☐	☐
Makes it easier to complete work tasks	☐	☐	☐	☐	☐
Increases morale	☐	☐	☐	☐	☐
Increases trust	☐	☐	☐	☐	☐
Reduces stress	☐	☐	☐	☐	☐

Routinely receiving **productive** information by **virtual media** (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD) from management…

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Decreases work error	☐	☐	☐	☐	☐
Decreases work delays	☐	☐	☐	☐	☐
Makes it easier to keep up with fast paced work	☐	☐	☐	☐	☐
Reduces interruptions	☐	☐	☐	☐	☐
Makes it easier to complete work tasks	☐	☐	☐	☐	☐
Increases morale	☐	☐	☐	☐	☐
Increases trust	☐	☐	☐	☐	☐
Reduces stress	☐	☐	☐	☐	☐

The next questions address the degree to which you feel "unproductive" information received from management through each communication channel affects your productivity. For each question please select the degree (strongly disagree, disagree, not applicable, agree, strongly agree) that represents the effect of the information by channel on your day or your perception of your job. The word “unproductive” in this survey means one or more of the following: waste of time; not relevant to my job; does not add anything to my job; of no value to my job; and does not make my job more productive or effective. The word ‘management’ in this survey means your immediate supervisor or one level up, whoever is responsible for the primary delegation of tasks and workload to you.

Routinely receiving **unproductive** information **face-to-face** from management…

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable. We do not use face-to-face communication in my organization.
Increases work errors	☐	☐	☐	☐	☐	☐
Increases work delays	☐	☐	☐	☐	☐	☐
Makes it harder to keep up with fast paced work	☐	☐	☐	☐	☐	☐
Increases interruptions	☐	☐	☐	☐	☐	☐
Makes it harder to complete work tasks	☐	☐	☐	☐	☐	☐
Decreases morale	☐	☐	☐	☐	☐	☐
Decreases trust	☐	☐	☐	☐	☐	☐
Increases stress	☐	☐	☐	☐	☐	☐

Routinely receiving **unproductive** information by **telephone** from management…

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable. Telephone is not used by my organization.
Increases work error	☐	☐	☐	☐	☐	☐
Increases work delays	☐	☐	☐	☐	☐	☐
Makes it harder to keep up with fast paced work	☐	☐	☐	☐	☐	☐
Increases interruptions	☐	☐	☐	☐	☐	☐
Makes it harder to complete work tasks	☐	☐	☐	☐	☐	☐
Decreases morale	☐	☐	☐	☐	☐	☐
Decreases trust	☐	☐	☐	☐	☐	☐
Increases stress	☐	☐	☐	☐	☐	☐

Routinely receiving **unproductive** information by **written documents** (memos, letters, newsletters, manuals, instructions, bulletin boards) from management…

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable. Written Documents are not used by my organization.
Increases work error	☐	☐	☐	☐	☐	☐
Increases work delays	☐	☐	☐	☐	☐	☐
Makes it harder to keep up with fast paced work	☐	☐	☐	☐	☐	☐
Increases interruptions	☐	☐	☐	☐	☐	☐
Makes it harder to complete work tasks	☐	☐	☐	☐	☐	☐
Decreases morale	☐	☐	☐	☐	☐	☐
Decreases trust	☐	☐	☐	☐	☐	☐
Increases stress	☐	☐	☐	☐	☐	☐

Routinely receiving **unproductive** information by **electronic media** (e-mail, text, Blackberry, I-M, Internet, Intranet) from management…

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable. We do not use electronic media in my organization.
Increases work error	☐	☐	☐	☐	☐	☐
Increases work delays	☐	☐	☐	☐	☐	☐
Makes it harder to keep up with fast paced work	☐	☐	☐	☐	☐	☐
Increases interruptions	☐	☐	☐	☐	☐	☐
Makes it harder to complete work tasks	☐	☐	☐	☐	☐	☐
Decreases morale	☐	☐	☐	☐	☐	☐
Decreases trust	☐	☐	☐	☐	☐	☐
Increases stress	☐	☐	☐	☐	☐	☐

Routinely receiving **unproductive** information by **virtual media** (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD) from management…

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable. We do not use virtual media in my organization.
Increases work error	☐	☐	☐	☐	☐	☐
Increases work delays	☐	☐	☐	☐	☐	☐
Makes it harder to keep up with fast paced work	☐	☐	☐	☐	☐	☐
Increases interruptions	☐	☐	☐	☐	☐	☐
Makes it harder to complete work tasks	☐	☐	☐	☐	☐	☐
Decreases morale	☐	☐	☐	☐	☐	☐
Decreases morale	☐	☐	☐	☐	☐	☐
Increases stress	☐	☐	☐	☐	☐	☐

Please indicate the frequency that each channel is used in your organization.

	Daily	Weekly	Monthly	Quarterly	Yearly	We Do Not Use This Communication Channel	We Do Not Use This Communication Channel, But I Wish We Did
Face-to-face	☐	☐	☐	☐	☐	☐	☐
Telephone	☐	☐	☐	☐	☐	☐	☐
Written Document	☐	☐	☐	☐	☐	☐	☐
Electronic Media	☐	☐	☐	☐	☐	☐	☐
Virtual Media	☐	☐	☐	☐	☐	☐	☐

Additional Comments:

End of interview. Thank you for your participation.

APPENDIX B

Demographics of Population

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
What is your gender?	204	1	2	1.48	.501
What is your ethnicity?	204	1	6	1.12	.609
Agriculture	204	0	1	.52	.501
County Director	204	0	0	.00	.000
Agent	204	0	0	.00	.000
Family and Consumer Sciences	204	0	1	.33	.471
Community Resource Development	204	0	1	.23	.422
4-H Youth Development	204	0	1	.49	.501
I work primarily in a _____ geographic area.	204	1	3	1.37	.665
Valid N (listwise)	204				

Year Born?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Traditionalist	6	3.0	3.0	3.0
	Baby Boomer	113	55.0	55.0	58.0
	Generation X	55	27.0	27.0	85.0
	Millennial	30	15.0	15.0	100.00
	Total	204	100.0	100.0	

What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	106	52.0	52.0	52.0
	Female	98	48.0	48.0	100.0
	Total	204	100.0	100.0	

What is your ethnicity?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Caucasian	192	94.1	94.1	94.1
	African American	8	3.9	3.9	98.0
	Native American	1	.5	.5	98.5
	Hispanic/Latino	1	.5	.5	99.0
	Other	2	1.0	1.0	100.0
	Total	204	100.0	100.0	

County Director

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	204	100.0	100.0	100.0

Agent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	204	100.0	100.0	100.0

Agriculture

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	97	47.5	47.5	47.5
	Yes	107	52.5	52.5	100.0
	Total	204	100.0	100.0	

Family and Consumer Sciences

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	137	67.2	67.2	67.2
	Yes	67	32.8	32.8	100.0
	Total	204	100.0	100.0	

Community Resource Development

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	157	77.0	77.0	77.0
	Yes	47	23.0	23.0	100.0
	Total	204	100.0	100.0	

4-H Youth Development

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	104	51.0	51.0	51.0
	Yes	100	49.0	49.0	100.0
	Total	204	100.0	100.0	

The extensions agencies are spread out in across the state and are located in three primary geographic areas: rural, suburban and urban.

I work primarily in a _____ geographic area.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural	149	73.0	73.0	73.0
	Suburban	34	16.7	16.7	89.7
	Urban	21	10.3	10.3	100.0
	Total	204	100.0	100.0	

APPENDIX C

Reliability and Validity of Instrument

Construct	Factor Loadings	% of Variance	Cronbach's Alpha
PF2F	.729-.805	60.345	.906
PT	.704-.859	62.305	.912
PWD	.733-.830	60.22	.903
PEM	.756-.849	62.942	.915
PVM	.714-.867	67.54	.929
UF2F	.742-.885	67.995	.931
UT	.813-.910	74.965	.951
UWD	.857-.913	78.984	.962
UEM	.794-.908	75.534	.948
UVM	.815-.917	76.245	.955

Component Matrix[a]

	Component
	1
Prod F2F DE	.729
Prod F2F DD	.780
Prod F2F EFPW	.782
Prod F2F RI	.766
Prod F2F ECWT	.804
Prod F2F IM	.805
Prod F2F IT	.767
Prod F2F RS	.778

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Correlation Matrix

		Prod F2F DE	Prod F2F DD	Prod F2F EFPW	Prod F2F RI	Prod F2F ECWT	Prod F2F IM	Prod F2F IT	Prod F2F RS
Correlation	Prod F2F DE	1.000	.738	.531	.469	.488	.488	.442	.409
	Prod F2F DD	.738	1.000	.658	.540	.530	.480	.448	.467
	Prod F2F EFPW	.531	.658	1.000	.592	.634	.485	.435	.522
	Prod F2F RI	.469	.540	.592	1.000	.623	.504	.491	.541
	Prod F2F ECWT	.488	.530	.634	.623	1.000	.591	.541	.572
	Prod F2F IM	.488	.480	.485	.504	.591	1.000	.766	.674
	Prod F2F IT	.442	.448	.435	.491	.541	.766	1.000	.638
	Prod F2F RS	.409	.467	.522	.541	.572	.674	.638	1.000

Communalities

	Initial	Extraction
Prod F2F DE	1.000	.532
Prod F2F DD	1.000	.609
Prod F2F EFPW	1.000	.612
Prod F2F RI	1.000	.586
Prod F2F ECWT	1.000	.647
Prod F2F IM	1.000	.648
Prod F2F IT	1.000	.588
Prod F2F RS	1.000	.605

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.828	60.345	60.345	4.828	60.345	60.345
2	.959	11.989	72.334			
3	.646	8.077	80.411			
4	.407	5.086	85.497			
5	.383	4.787	90.284			
6	.323	4.043	94.327			
7	.236	2.944	97.271			
8	.218	2.729	100.000			

Extraction Method: Principal Component Analysis.

Correlation Matrix

		Prod T DE	Prod T DD	Prod T EFPW	Prod T RI	Prod T ECWT	Prod T IM	Prod T IT	Prod T RS
Correlation	Prod T DE	1.000	.665	.649	.451	.582	.492	.525	.505
	Prod T DD	.665	1.000	.707	.569	.679	.546	.460	.516
	Prod T EFPW	.649	.707	1.000	.582	.688	.496	.400	.528
	Prod T RI	.451	.569	.582	1.000	.594	.454	.349	.486
	Prod T ECWT	.582	.679	.688	.594	1.000	.670	.532	.639
	Prod T IM	.492	.546	.496	.454	.670	1.000	.827	.639
	Prod T IT	.525	.460	.400	.349	.532	.827	1.000	.650
	Prod T RS	.505	.516	.528	.486	.639	.639	.650	1.000

Communalities

	Initial	Extraction
Prod T DE	1.000	.595
Prod T DD	1.000	.669
Prod T EFPW	1.000	.644
Prod T RI	1.000	.495
Prod T ECWT	1.000	.737
Prod T IM	1.000	.662
Prod T IT	1.000	.563
Prod T RS	1.000	.619

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.984	62.305	62.305	4.984	62.305	62.305
2	.982	12.281	74.586			
3	.584	7.299	81.885			
4	.396	4.953	86.839			
5	.377	4.714	91.552			
6	.283	3.535	95.087			
7	.262	3.276	98.363			
8	.131	1.637	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Prod T DE	.771
Prod T DD	.818
Prod T EFPW	.803
Prod T RI	.704
Prod T ECWT	.859
Prod T IM	.814
Prod T IT	.750
Prod T RS	.786

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Correlation Matrix

		Prod WD DE	Prod WD DD	Prod WD EFPW	Prod WD RI	Prod WD ECWT	Prod WD IM	Prod WD IT	Prod WD RS
Correlation	Prod WD DE	1.000	.629	.539	.452	.537	.452	.524	.439
	Prod WD DD	.629	1.000	.692	.507	.555	.539	.570	.485
	Prod WD EFPW	.539	.692	1.000	.476	.616	.523	.578	.503
	Prod WD RI	.452	.507	.476	1.000	.580	.435	.347	.449
	Prod WD ECWT	.537	.555	.616	.580	1.000	.575	.552	.482
	Prod WD IM	.452	.539	.523	.435	.575	1.000	.845	.652
	Prod WD IT	.524	.570	.578	.347	.552	.845	1.000	.670
	Prod WD RS	.439	.485	.503	.449	.482	.652	.670	1.000

Communalities

	Initial	Extraction
Prod WD DE	1.000	.537
Prod WD DD	1.000	.647
Prod WD EFPW	1.000	.636
Prod WD RI	1.000	.449
Prod WD ECWT	1.000	.622
Prod WD IM	1.000	.668
Prod WD IT	1.000	.689
Prod WD RS	1.000	.570

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.818	60.222	60.222	4.818	60.222	60.222
2	.890	11.121	71.343			
3	.634	7.925	79.269			
4	.472	5.896	85.164			
5	.438	5.473	90.637			
6	.356	4.451	95.089			
7	.259	3.238	98.326			
8	.134	1.674	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Prod WD DE	.733
Prod WD DD	.804
Prod WD EFPW	.797
Prod WD RI	.670
Prod WD ECWT	.789
Prod WD IM	.817
Prod WD IT	.830
Prod WD RS	.755

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Correlation Matrix

		Prod WD DE	Prod WD DD	Prod WD EFPW	Prod WD RI	Prod WD ECWT	Prod WD IM	Prod WD IT	Prod WD RS
Correlation	Prod WD DE	1.000	.629	.539	.452	.537	.452	.524	.439
	Prod WD DD	.629	1.000	.692	.507	.555	.539	.570	.485
	Prod WD EFPW	.539	.692	1.000	.476	.616	.523	.578	.503
	Prod WD RI	.452	.507	.476	1.000	.580	.435	.347	.449
	Prod WD ECWT	.537	.555	.616	.580	1.000	.575	.552	.482
	Prod WD IM	.452	.539	.523	.435	.575	1.000	.845	.652
	Prod WD IT	.524	.570	.578	.347	.552	.845	1.000	.670
	Prod WD RS	.439	.485	.503	.449	.482	.652	.670	1.000

Communalities

	Initial	Extraction
Prod WD DE	1.000	.537
Prod WD DD	1.000	.647
Prod WD EFPW	1.000	.636
Prod WD RI	1.000	.449
Prod WD ECWT	1.000	.622
Prod WD IM	1.000	.668
Prod WD IT	1.000	.689
Prod WD RS	1.000	.570

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.818	60.222	60.222	4.818	60.222	60.222
2	.890	11.121	71.343			
3	.634	7.925	79.269			
4	.472	5.896	85.164			
5	.438	5.473	90.637			
6	.356	4.451	95.089			
7	.259	3.238	98.326			
8	.134	1.674	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Prod WD DE	.733
Prod WD DD	.804
Prod WD EFPW	.797
Prod WD RI	.670
Prod WD ECWT	.789
Prod WD IM	.817
Prod WD IT	.830
Prod WD RS	.755

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.915	.916	8

Item Statistics

	Mean	Std. Deviation	N
Prod E DE	3.71	.842	204
Prod E DD	3.72	.918	204
Prod E EFPW	3.90	.788	204
Prod E RI	3.67	.955	204
Prod E ECWT	3.70	.863	204
Prod E IM	3.19	.879	204
Prod E IT	3.19	.885	204
Prod E RS	3.28	.913	204

Inter-Item Correlation Matrix

	Prod E DE	Prod E DD	Prod E EFPW	Prod E RI	Prod E ECWT	Prod E IM	Prod E IT	Prod E RS
Prod E DE	1.000	.679	.640	.561	.624	.472	.483	.490
Prod E DD	.679	1.000	.718	.626	.663	.498	.471	.535
Prod E EFPW	.640	.718	1.000	.586	.724	.432	.365	.490
Prod E RI	.561	.626	.586	1.000	.644	.502	.434	.524
Prod E ECWT	.624	.663	.724	.644	1.000	.568	.513	.621
Prod E IM	.472	.498	.432	.502	.568	1.000	.848	.702
Prod E IT	.483	.471	.365	.434	.513	.848	1.000	.704
Prod E RS	.490	.535	.490	.524	.621	.702	.704	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.544	3.186	3.902	.716	1.225	.079	8
Item Variances	.777	.621	.911	.290	1.468	.008	8
Inter-Item Covariances	.446	.255	.660	.405	2.589	.008	8
Inter-Item Correlations	.576	.365	.848	.483	2.320	.012	8

Correlation Matrix

		Prod V DE	Prod V DD	Prod V EFPW	Prod V RI	Prod V ECWT	Prod V IM	Prod V IT	Prod V RS
Correlation	Prod V DE	1.000	.638	.601	.466	.693	.652	.698	.679
	Prod V DD	.638	1.000	.708	.582	.616	.538	.557	.649
	Prod V EFPW	.601	.708	1.000	.537	.702	.555	.528	.591
	Prod V RI	.466	.582	.537	1.000	.638	.469	.496	.573
	Prod V ECWT	.693	.616	.702	.638	1.000	.677	.664	.675
	Prod V IM	.652	.538	.555	.469	.677	1.000	.865	.739
	Prod V IT	.698	.557	.528	.496	.664	.865	1.000	.762
	Prod V RS	.679	.649	.591	.573	.675	.739	.762	1.000

Correlation Matrix

		Prod E DE	Prod E DD	Prod E EFPW	Prod E RI	Prod E ECWT	Prod E IM	Prod E IT	Prod E RS
Correlation	Prod E DE	1.000	.679	.640	.561	.624	.472	.483	.490
	Prod E DD	.679	1.000	.718	.626	.663	.498	.471	.535
	Prod E EFPW	.640	.718	1.000	.586	.724	.432	.365	.490
	Prod E RI	.561	.626	.586	1.000	.644	.502	.434	.524
	Prod E ECWT	.624	.663	.724	.644	1.000	.568	.513	.621
	Prod E IM	.472	.498	.432	.502	.568	1.000	.848	.702
	Prod E IT	.483	.471	.365	.434	.513	.848	1.000	.704

Correlation Matrix

		Prod E DE	Prod E DD	Prod E EFPW	Prod E RI	Prod E ECWT	Prod E IM	Prod E IT	Prod E RS
Correlation	Prod E DE	1.000	.679	.640	.561	.624	.472	.483	.490
	Prod E DD	.679	1.000	.718	.626	.663	.498	.471	.535
	Prod E EFPW	.640	.718	1.000	.586	.724	.432	.365	.490
	Prod E RI	.561	.626	.586	1.000	.644	.502	.434	.524
	Prod E ECWT	.624	.663	.724	.644	1.000	.568	.513	.621
	Prod E IM	.472	.498	.432	.502	.568	1.000	.848	.702
	Prod E IT	.483	.471	.365	.434	.513	.848	1.000	.704
	Prod E RS	.490	.535	.490	.524	.621	.702	.704	1.000

Communalities

	Initial	Extraction
Prod E DE	1.000	.677
Prod E DD	1.000	.765
Prod E EFPW	1.000	.794
Prod E RI	1.000	.634
Prod E ECWT	1.000	.752
Prod E IM	1.000	.878
Prod E IT	1.000	.892
Prod E RS	1.000	.751

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.035	62.942	62.942	5.035	62.942	62.942	3.467	43.339	43.339
2	1.106	13.827	76.770	1.106	13.827	76.770	2.674	33.430	76.770
3	.464	5.799	82.569						
4	.408	5.100	87.669						
5	.314	3.929	91.598						
6	.304	3.794	95.393						
7	.228	2.850	98.242						
8	.141	1.758	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component	
	1	2
Prod E DE	.780	-.262
Prod E DD	.820	-.303
Prod E EFPW	.783	-.424
Prod E RI	.768	-.210
Prod E ECWT	.849	-.177
Prod E IM	.789	.506
Prod E IT	.756	.567
Prod E RS	.798	.337

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Rotated Component Matrix[a]

	Component	
	1	2
Prod E DE	.770	.290
Prod E DD	.827	.284
Prod E EFPW	.875	.166
Prod E RI	.728	.323
Prod E ECWT	.770	.399
Prod E IM	.292	.891
Prod E IT	.228	.917
Prod E RS	.406	.765

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	.775	.632
2	-.632	.775

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Communalities

	Initial	Extraction
Prod V DE	1.000	.688
Prod V DD	1.000	.642

Prod V EFPW	1.000	.627
Prod V RI	1.000	.510
Prod V ECWT	1.000	.746
Prod V IM	1.000	.710
Prod V IT	1.000	.729
Prod V RS	1.000	.751

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.403	67.540	67.540	5.403	67.540	67.540
2	.780	9.745	77.285			
3	.523	6.539	83.824			
4	.378	4.727	88.550			
5	.346	4.323	92.873			
6	.243	3.035	95.908			
7	.202	2.522	98.430			
8	.126	1.570	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
Prod V DE	.829
Prod V DD	.801
Prod V EFPW	.792
Prod V RI	.714
Prod V ECWT	.864
Prod V IM	.843
Prod V IT	.854
Prod V RS	.867

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Correlation Matrix

		UnProd F2F IE	UnProd F2F ID	UnProd F2F HFPW	UnProd F2F II	UnProd F2F HCWT	UnProd F2F DM	UnProd F2F DT	UnProd F2F IS
Correlation	UnProd F2F IE	1.000	.662	.607	.539	.537	.541	.595	.456
	UnProd F2F ID	.662	1.000	.835	.738	.791	.576	.508	.642
	UnProd F2F HFPW	.607	.835	1.000	.740	.780	.627	.543	.664
	UnProd F2F II	.539	.738	.740	1.000	.734	.517	.477	.557
	UnProd F2F HCWT	.537	.791	.780	.734	1.000	.593	.504	.635
	UnProd F2F DM	.541	.576	.627	.517	.593	1.000	.798	.787
	UnProd F2F DT	.595	.508	.543	.477	.504	.798	1.000	.713
	UnProd F2F IS	.456	.642	.664	.557	.635	.787	.713	1.000

Communalities

	Initial	Extraction

UnProd F2F IE	1.000	.550
UnProd F2F ID	1.000	.770
UnProd F2F HFPW	1.000	.783
UnProd F2F II	1.000	.651
UnProd F2F HCWT	1.000	.724
UnProd F2F DM	1.000	.677
UnProd F2F DT	1.000	.597
UnProd F2F IS	1.000	.686

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.440	67.995	67.995	5.440	67.995	67.995
2	.931	11.642	79.637			
3	.577	7.209	86.846			
4	.307	3.842	90.688			
5	.231	2.886	93.574			
6	.195	2.441	96.015			
7	.175	2.193	98.208			
8	.143	1.792	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
UnProd F2F IE	.742
UnProd F2F ID	.878
UnProd F2F HFPW	.885
UnProd F2F II	.807
UnProd F2F HCWT	.851
UnProd F2F DM	.823
UnProd F2F DT	.773
UnProd F2F IS	.828

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Correlation Matrix

		UnProd T IE	UnProd T ID	UnProd T HFPW	UnProd T II	UnProd T HCWT	UnProd T DM	UnProd T DT	Unprod T IS
Correlation	UnProd T IE	1.000	.769	.716	.649	.671	.684	.649	.631
	UnProd T ID	.769	1.000	.809	.780	.760	.601	.569	.654
	UnProd T HFPW	.716	.809	1.000	.829	.855	.680	.631	.724
	UnProd T II	.649	.780	.829	1.000	.845	.649	.553	.724
	UnProd T HCWT	.671	.760	.855	.845	1.000	.738	.645	.765
	UnProd T DM	.684	.601	.680	.649	.738	1.000	.879	.769
	UnProd T DT	.649	.569	.631	.553	.645	.879	1.000	.730
	Unprod T IS	.631	.654	.724	.724	.765	.769	.730	1.000

Communalities

	Initial	Extraction
UnProd T IE	1.000	.691
UnProd T ID	1.000	.738

UnProd T HFPW	1.000	.818
UnProd T II	1.000	.763
UnProd T HCWT	1.000	.828
UnProd T DM	1.000	.747
UnProd T DT	1.000	.661
Unprod T IS	1.000	.751

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.997	74.965	74.965	5.997	74.965	74.965
2	.742	9.278	84.243			
3	.448	5.598	89.841			
4	.234	2.929	92.770			
5	.185	2.312	95.082			
6	.164	2.054	97.137			
7	.134	1.672	98.809			
8	.095	1.191	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
UnProd T IE	.831
UnProd T ID	.859
UnProd T HFPW	.905
UnProd T II	.874
UnProd T HCWT	.910
UnProd T DM	.865
UnProd T DT	.813
Unprod T IS	.866

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Correlation Matrix

		UnProd WD IE	UnProd WD ID	UnProd WD HFPW	UnProd WD II	UnProd WD HCWT	UnProd WD DM	UnProd WD DT	UnProd WD IS
Correlation	UnProd WD IE	1.000	.810	.746	.746	.752	.774	.736	.741
	UnProd WD ID	.810	1.000	.859	.816	.840	.735	.685	.740
	UnProd WD HFPW	.746	.859	1.000	.786	.818	.679	.659	.738
	UnProd WD II	.746	.816	.786	1.000	.860	.688	.643	.708
	UnProd WD HCWT	.752	.840	.818	.860	1.000	.736	.689	.744
	UnProd WD DM	.774	.735	.679	.688	.736	1.000	.901	.845
	UnProd WD DT	.736	.685	.659	.643	.689	.901	1.000	.794
	UnProd WD IS	.741	.740	.738	.708	.744	.845	.794	1.000

Communalities

	Initial	Extraction
UnProd WD IE	1.000	.787
UnProd WD ID	1.000	.834

UnProd WD HFPW	1.000	.782
UnProd WD II	1.000	.773
UnProd WD HCWT	1.000	.822
UnProd WD DM	1.000	.798
UnProd WD DT	1.000	.735
UnProd WD IS	1.000	.787

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.319	78.984	78.984	6.319	78.984	78.984
2	.639	7.986	86.970			
3	.268	3.347	90.317			
4	.240	3.001	93.318			
5	.190	2.373	95.692			
6	.136	1.695	97.386			
7	.125	1.565	98.951			
8	.084	1.049	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
UnProd WD IE	.887
UnProd WD ID	.913
UnProd WD HFPW	.885
UnProd WD II	.879
UnProd WD HCWT	.907
UnProd WD DM	.893
UnProd WD DT	.857
UnProd WD IS	.887

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Correlation Matrix

		UnProd E IE	UnProd E ID	UnProd E HFPW	UnProd E II	UnProd E HCWT	UnProd W DM	UnProd E DT	UnProd E IS
Correlation	UnProd E IE	1.000	.782	.755	.627	.774	.701	.681	.688
	UnProd E ID	.782	1.000	.848	.743	.774	.541	.552	.687
	UnProd E HFPW	.755	.848	1.000	.733	.835	.597	.637	.731
	UnProd E II	.627	.743	.733	1.000	.735	.523	.482	.612
	UnProd E HCWT	.774	.774	.835	.735	1.000	.669	.658	.758
	UnProd W DM	.701	.541	.597	.523	.669	1.000	.886	.737
	UnProd E DT	.681	.552	.637	.482	.658	.886	1.000	.740
	UnProd E IS	.688	.687	.731	.612	.758	.737	.740	1.000

Communalities

	Initial	Extraction
UnProd E IE	1.000	.771
UnProd E ID	1.000	.752
UnProd E HFPW	1.000	.806

UnProd E II	1.000	.630
UnProd E HCWT	1.000	.824
UnProd W DM	1.000	.674
UnProd E DT	1.000	.671
UnProd E IS	1.000	.755

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.883	73.534	73.534	5.883	73.534	73.534
2	.857	10.709	84.243			
3	.346	4.319	88.562			
4	.293	3.661	92.223			
5	.204	2.551	94.774			
6	.202	2.530	97.304			
7	.119	1.485	98.789			
8	.097	1.211	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
UnProd E IE	.878
UnProd E ID	.867
UnProd E HFPW	.898
UnProd E II	.794
UnProd E HCWT	.908
UnProd W DM	.821
UnProd E DT	.819
UnProd E IS	.869

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
UnProd E IE	.878
UnProd E ID	.867
UnProd E HFPW	.898
UnProd E II	.794
UnProd E HCWT	.908
UnProd W DM	.821
UnProd E DT	.819
UnProd E IS	.869

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Correlation Matrix

		UnProd V IE	UnProd V ID	UnProd V HFPW	UnProd V II	UnProd V HCWT	UnProd V DM	UnProd V DT	UnProd V IS
Correlation	UnProd V IE	1.000	.771	.777	.714	.776	.644	.625	.692
	UnProd V ID	.771	1.000	.905	.817	.811	.646	.613	.756
	UnProd V HFPW	.777	.905	1.000	.815	.876	.626	.599	.772
	UnProd V II	.714	.817	.815	1.000	.787	.580	.557	.724
	UnProd V HCWT	.776	.811	.876	.787	1.000	.659	.627	.757

	UnProd V DM	.644	.646	.626	.580	.659	1.000	.982	.721
	UnProd V DT	.625	.613	.599	.557	.627	.982	1.000	.734
	UnProd V IS	.692	.756	.772	.724	.757	.721	.734	1.000

Communalities

	Initial	Extraction
UnProd V IE	1.000	.739
UnProd V ID	1.000	.826
UnProd V HFPW	1.000	.840
UnProd V II	1.000	.741
UnProd V HCWT	1.000	.818
UnProd V DM	1.000	.693
UnProd V DT	1.000	.664
UnProd V IS	1.000	.778

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.100	76.245	76.245	6.100	76.245	76.245
2	.868	10.846	87.091			
3	.307	3.841	90.932			
4	.234	2.921	93.853			
5	.214	2.672	96.525			
6	.186	2.331	98.856			
7	.076	.956	99.812			
8	.015	.188	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component
	1
UnProd V IE	.860
UnProd V ID	.909
UnProd V HFPW	.917
UnProd V II	.861
UnProd V HCWT	.904
UnProd V DM	.833
UnProd V DT	.815
UnProd V IS	.882

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Reliability Statistics

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.906	.906	8

Item Statistics

	Mean	Std. Deviation	N
Prod F2F DE	3.76	.943	204
Prod F2F DD	3.51	.995	204
Prod F2F EFPW	3.27	.983	204
Prod F2F RI	3.06	1.003	204
Prod F2F ECWT	3.41	.951	204
Prod F2F IM	3.75	.987	204
Prod F2F IT	3.91	.943	204
Prod F2F RS	3.26	1.031	204

Inter-Item Correlation Matrix

	Prod F2F DE	Prod F2F DD	Prod F2F EFPW	Prod F2F RI	Prod F2F ECWT	Prod F2F IM	Prod F2F IT	Prod F2F RS
Prod F2F DE	1.000	.738	.531	.469	.488	.488	.442	.409
Prod F2F DD	.738	1.000	.658	.540	.530	.480	.448	.467
Prod F2F EFPW	.531	.658	1.000	.592	.634	.485	.435	.522
Prod F2F RI	.469	.540	.592	1.000	.623	.504	.491	.541
Prod F2F ECWT	.488	.530	.634	.623	1.000	.591	.541	.572

Prod F2F IM	.488	.480	.485	.504	.591	1.000	.766	.674
Prod F2F IT	.442	.448	.435	.491	.541	.766	1.000	.638
Prod F2F RS	.409	.467	.522	.541	.572	.674	.638	1.000

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.912	.913	8

Item Statistics

	Mean	Std. Deviation	N
Prod T DE	3.22	.970	204
Prod T DD	3.09	.960	204
Prod T EFPW	3.17	.934	204
Prod T RI	2.73	.947	204
Prod T ECWT	3.12	.897	204
Prod T IM	3.25	.887	204
Prod T IT	3.34	.887	204
Prod T RS	2.97	.901	204

Inter-Item Correlation Matrix

	Prod T DE	Prod T DD	Prod T EFPW	Prod T RI	Prod T ECWT	Prod T IM	Prod T IT	Prod T RS
Prod T DE	1.000	.665	.649	.451	.582	.492	.525	.505
Prod T DD	.665	1.000	.707	.569	.679	.546	.460	.516
Prod T EFPW	.649	.707	1.000	.582	.688	.496	.400	.528
Prod T RI	.451	.569	.582	1.000	.594	.454	.349	.486
Prod T ECWT	.582	.679	.688	.594	1.000	.670	.532	.639
Prod T IM	.492	.546	.496	.454	.670	1.000	.827	.639
Prod T IT	.525	.460	.400	.349	.532	.827	1.000	.650
Prod T RS	.505	.516	.528	.486	.639	.639	.650	1.000

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.903	.905	8

Item Statistics

	Mean	Std. Deviation	N
Prod WD DE	3.66	.925	204
Prod WD DD	3.31	.936	204
Prod WD EFPW	3.12	.939	204
Prod WD RI	3.39	.999	204
Prod WD ECWT	3.40	.907	204
Prod WD IM	3.07	.845	204
Prod WD IT	3.14	.821	204
Prod WD RS	3.01	.893	204

Inter-Item Correlation Matrix

	Prod WD DE	Prod WD DD	Prod WD EFPW	Prod WD RI	Prod WD ECWT	Prod WD IM	Prod WD IT	Prod WD RS
Prod WD DE	1.000	.629	.539	.452	.537	.452	.524	.439
Prod WD DD	.629	1.000	.692	.507	.555	.539	.570	.485
Prod WD EFPW	.539	.692	1.000	.476	.616	.523	.578	.503
Prod WD RI	.452	.507	.476	1.000	.580	.435	.347	.449
Prod WD ECWT	.537	.555	.616	.580	1.000	.575	.552	.482
Prod WD IM	.452	.539	.523	.435	.575	1.000	.845	.652
Prod WD IT	.524	.570	.578	.347	.552	.845	1.000	.670
Prod WD RS	.439	.485	.503	.449	.482	.652	.670	1.000

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.915	.916	8

Item Statistics

	Mean	Std. Deviation	N
Prod E DE	3.71	.842	204
Prod E DD	3.72	.918	204

Prod E EFPW	3.90	.788	204
Prod E RI	3.67	.955	204
Prod E ECWT	3.70	.863	204
Prod E IM	3.19	.879	204
Prod E IT	3.19	.885	204
Prod E RS	3.28	.913	204

Inter-Item Correlation Matrix

	Prod E DE	Prod E DD	Prod E EFPW	Prod E RI	Prod E ECWT	Prod E IM	Prod E IT	Prod E RS
Prod E DE	1.000	.679	.640	.561	.624	.472	.483	.490
Prod E DD	.679	1.000	.718	.626	.663	.498	.471	.535
Prod E EFPW	.640	.718	1.000	.586	.724	.432	.365	.490
Prod E RI	.561	.626	.586	1.000	.644	.502	.434	.524
Prod E ECWT	.624	.663	.724	.644	1.000	.568	.513	.621
Prod E IM	.472	.498	.432	.502	.568	1.000	.848	.702
Prod E IT	.483	.471	.365	.434	.513	.848	1.000	.704
Prod E RS	.490	.535	.490	.524	.621	.702	.704	1.000

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.929	.931	8

Item Statistics

	Mean	Std. Deviation	N
Prod V DE	3.22	.938	204
Prod V DD	3.00	.970	204

Prod V EFPW	3.21	.996	204
Prod V RI	3.03	1.012	204
Prod V ECWT	3.19	.930	204
Prod V IM	2.87	.869	204
Prod V IT	2.91	.849	204
Prod V RS	2.90	.854	204

Inter-Item Correlation Matrix

	Prod V DE	Prod V DD	Prod V EFPW	Prod V RI	Prod V ECWT	Prod V IM	Prod V IT	Prod V RS
Prod V DE	1.000	.638	.601	.466	.693	.652	.698	.679
Prod V DD	.638	1.000	.708	.582	.616	.538	.557	.649
Prod V EFPW	.601	.708	1.000	.537	.702	.555	.528	.591
Prod V RI	.466	.582	.537	1.000	.638	.469	.496	.573
Prod V ECWT	.693	.616	.702	.638	1.000	.677	.664	.675
Prod V IM	.652	.538	.555	.469	.677	1.000	.865	.739
Prod V IT	.698	.557	.528	.496	.664	.865	1.000	.762
Prod V RS	.679	.649	.591	.573	.675	.739	.762	1.000

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.931	.932	8

Item Statistics

	Mean	Std. Deviation	N
UnProd F2F IE	3.53	1.004	204
UnProd F2F ID	3.93	.960	204
UnProd F2F HFPW	3.91	.927	204

UnProd F2F II	3.90	.949	204
UnProd F2F HCWT	3.98	.965	204
UnProd F2F DM	3.76	1.075	204
UnProd F2F DT	3.60	1.094	204
UnProd F2F IS	3.98	1.029	204

nter-Item Correlation Matrix

	UnProd F2F IE	UnProd F2F ID	UnProd F2F HFPW	UnProd F2F II	UnProd F2F HCWT	UnProd F2F DM	UnProd F2F DT	UnProd F2F IS
UnProd F2F IE	1.000	.662	.607	.539	.537	.541	.595	.456
UnProd F2F ID	.662	1.000	.835	.738	.791	.576	.508	.642
UnProd F2F HFPW	.607	.835	1.000	.740	.780	.627	.543	.664
UnProd F2F II	.539	.738	.740	1.000	.734	.517	.477	.557
UnProd F2F HCWT	.537	.791	.780	.734	1.000	.593	.504	.635
UnProd F2F DM	.541	.576	.627	.517	.593	1.000	.798	.787
UnProd F2F DT	.595	.508	.543	.477	.504	.798	1.000	.713
UnProd F2F IS	.456	.642	.664	.557	.635	.787	.713	1.000

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.951	.952	8

Item Statistics

	Mean	Std. Deviation	N
UnProd T IE	3.75	1.068	204
UnProd T ID	3.98	.970	204
UnProd T HFPW	3.99	.904	204

UnProd T II	4.10	.915	204
UnProd T HCWT	4.00	.962	204
UnProd T DM	3.71	1.061	204
UnProd T DT	3.60	1.071	204
Unprod T IS	3.98	.970	204

Inter-Item Correlation Matrix

	UnProd T IE	UnProd T ID	UnProd T HFPW	UnProd T II	UnProd T HCWT	UnProd T DM	UnProd T DT	Unprod T IS
UnProd T IE	1.000	.769	.716	.649	.671	.684	.649	.631
UnProd T ID	.769	1.000	.809	.780	.760	.601	.569	.654
UnProd T HFPW	.716	.809	1.000	.829	.855	.680	.631	.724
UnProd T II	.649	.780	.829	1.000	.845	.649	.553	.724
UnProd T HCWT	.671	.760	.855	.845	1.000	.738	.645	.765
UnProd T DM	.684	.601	.680	.649	.738	1.000	.879	.769
UnProd T DT	.649	.569	.631	.553	.645	.879	1.000	.730
Unprod T IS	.631	.654	.724	.724	.765	.769	.730	1.000

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.962	.962	8

Item Statistics

	Mean	Std. Deviation	N
UnProd WD IE	3.52	1.080	204
UnProd WD ID	3.76	1.024	204
UnProd WD HFPW	3.71	1.031	204

UnProd WD II	3.61	1.070	204
UnProd WD HCWT	3.68	1.057	204
UnProd WD DM	3.57	1.017	204
UnProd WD DT	3.59	1.021	204
UnProd WD IS	3.72	.991	204

Inter-Item Correlation Matrix

	UnProd WD IE	UnProd WD ID	UnProd WD HFPW	UnProd WD II	UnProd WD HCWT	UnProd WD DM	UnProd WD DT	UnProd WD IS
UnProd WD IE	1.000	.810	.746	.746	.752	.774	.736	.741
UnProd WD ID	.810	1.000	.859	.816	.840	.735	.685	.740
UnProd WD HFPW	.746	.859	1.000	.786	.818	.679	.659	.738
UnProd WD II	.746	.816	.786	1.000	.860	.688	.643	.708
UnProd WD HCWT	.752	.840	.818	.860	1.000	.736	.689	.744
UnProd WD DM	.774	.735	.679	.688	.736	1.000	.901	.845
UnProd WD DT	.736	.685	.659	.643	.689	.901	1.000	.794
UnProd WD IS	.741	.740	.738	.708	.744	.845	.794	1.000

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.948	.948	8

Item Statistics

	Mean	Std. Deviation	N
UnProd E IE	3.52	1.085	204
UnProd E ID	3.79	1.036	204
UnProd E HFPW	3.65	1.098	204

UnProd E II	3.75	1.083	204
UnProd E HCWT	3.73	1.033	204
UnProd W DM	3.53	1.019	204
UnProd E DT	3.44	1.042	204
UnProd E IS	3.70	1.044	204

Inter-Item Correlation Matrix

	UnProd E IE	UnProd E ID	UnProd E HFPW	UnProd E II	UnProd E HCWT	UnProd W DM	UnProd E DT	UnProd E IS
UnProd E IE	1.000	.782	.755	.627	.774	.701	.681	.688
UnProd E ID	.782	1.000	.848	.743	.774	.541	.552	.687
UnProd E HFPW	.755	.848	1.000	.733	.835	.597	.637	.731
UnProd E II	.627	.743	.733	1.000	.735	.523	.482	.612
UnProd E HCWT	.774	.774	.835	.735	1.000	.669	.658	.758
UnProd W DM	.701	.541	.597	.523	.669	1.000	.886	.737
UnProd E DT	.681	.552	.637	.482	.658	.886	1.000	.740
UnProd E IS	.688	.687	.731	.612	.758	.737	.740	1.000

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.955	.955	8

Item Statistics

	Mean	Std. Deviation	N
UnProd V IE	3.64	1.076	204
UnProd V ID	3.92	1.026	204
UnProd V HFPW	3.84	1.010	204

UnProd V II	3.85	1.037	204
UnProd V HCWT	3.83	.983	204
UnProd V DM	3.64	1.039	204
UnProd V DT	3.67	1.020	204
UnProd V IS	3.85	1.006	204

Inter-Item Correlation Matrix

	UnProd V IE	UnProd V ID	UnProd V HFPW	UnProd V II	UnProd V HCWT	UnProd V DM	UnProd V DT	UnProd V IS
UnProd V IE	1.000	.771	.777	.714	.776	.644	.625	.692
UnProd V ID	.771	1.000	.905	.817	.811	.646	.613	.756
UnProd V HFPW	.777	.905	1.000	.815	.876	.626	.599	.772
UnProd V II	.714	.817	.815	1.000	.787	.580	.557	.724
UnProd V HCWT	.776	.811	.876	.787	1.000	.659	.627	.757
UnProd V DM	.644	.646	.626	.580	.659	1.000	.982	.721
UnProd V DT	.625	.613	.599	.557	.627	.982	1.000	.734
UnProd V IS	.692	.756	.772	.724	.757	.721	.734	1.000

APPENDIX D

Data Distribution Characteristics

Statistics

		prodf2f	prodt	prodwd	prode	prodv	unprodf2f	unprodt	unprodwd	unprode	unprodv
N	Valid	204	204	204	204	204	204	204	204	204	204
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		3.4945	3.1103	3.2623	3.5441	3.0411	3.8235	3.8873	3.6446	3.6379	3.7794
Median		3.6250	3.1250	3.2500	3.6250	3.0000	3.9375	3.8750	3.6250	3.7500	3.8750
Std. Deviation		.76073	.72713	.70208	.69805	.75903	.82270	.85566	.92094	.90390	.89379
Variance		.579	.529	.493	.487	.576	.677	.732	.848	.817	.799

Skewness		-.479	-.396	-.416	-.650	-.259	-.512	-.117	.031	-.319	.015
Std. Error of Skewness		.170	.170	.170	.170	.170	.170	.170	.170	.170	.170
Kurtosis		.522	.358	.570	1.576	.484	1.011	1.018	-.035	.255	.307
Std. Error of Kurtosis		.339	.339	.339	.339	.339	.339	.339	.339	.339	.339
Range		4.00	4.00	4.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00
Minimum		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00
Percentiles	25	3.0000	2.6250	2.8750	3.1250	2.6250	3.2500	3.3750	3.0000	3.0000	3.0000
	50	3.6250	3.1250	3.2500	3.6250	3.0000	3.9375	3.8750	3.6250	3.7500	3.8750
	75	4.0000	3.6250	3.7500	4.0000	3.5000	4.3750	4.3438	4.1250	4.0000	4.2188

prodf2f

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	.5	.5	.5
	1.13	1	.5	.5	1.0
	1.63	1	.5	.5	1.5
	1.75	2	1.0	1.0	2.5
	1.88	2	1.0	1.0	3.4
	2.00	5	2.5	2.5	5.9
	2.13	1	.5	.5	6.4
	2.25	4	2.0	2.0	8.3
	2.38	3	1.5	1.5	9.8
	2.50	4	2.0	2.0	11.8
	2.63	3	1.5	1.5	13.2

	2.75	6	2.9	2.9	16.2
	2.88	4	2.0	2.0	18.1
	3.00	18	8.8	8.8	27.0
	3.13	5	2.5	2.5	29.4
	3.25	12	5.9	5.9	35.3
	3.38	16	7.8	7.8	43.1
	3.50	9	4.4	4.4	47.5
	3.63	21	10.3	10.3	57.8
	3.75	11	5.4	5.4	63.2
	3.88	19	9.3	9.3	72.5
	4.00	22	10.8	10.8	83.3
	4.13	6	2.9	2.9	86.3
	4.25	5	2.5	2.5	88.7
	4.38	4	2.0	2.0	90.7
	4.50	3	1.5	1.5	92.2
	4.63	4	2.0	2.0	94.1
	4.75	3	1.5	1.5	95.6
	4.88	1	.5	.5	96.1
	5.00	8	3.9	3.9	100.0
	Total	204	100.0	100.0	

Prodt

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	3	1.5	1.5	1.5
	1.25	1	.5	.5	2.0
	1.50	1	.5	.5	2.5
	1.63	1	.5	.5	2.9
	1.75	2	1.0	1.0	3.9
	1.88	4	2.0	2.0	5.9
	2.00	12	5.9	5.9	11.8
	2.13	1	.5	.5	12.3
	2.25	3	1.5	1.5	13.7
	2.38	6	2.9	2.9	16.7
	2.50	11	5.4	5.4	22.1

	2.63	7	3.4	3.4	25.5
	2.75	8	3.9	3.9	29.4
	2.88	9	4.4	4.4	33.8
	3.00	24	11.8	11.8	45.6
	3.13	10	4.9	4.9	50.5
	3.25	15	7.4	7.4	57.8
	3.38	16	7.8	7.8	65.7
	3.50	15	7.4	7.4	73.0
	3.63	10	4.9	4.9	77.9
	3.75	11	5.4	5.4	83.3
	3.88	11	5.4	5.4	88.7
	4.00	13	6.4	6.4	95.1
	4.13	3	1.5	1.5	96.6
	4.25	3	1.5	1.5	98.0
	4.63	1	.5	.5	98.5
	4.88	1	.5	.5	99.0
	5.00	2	1.0	1.0	100.0
	Total	204	100.0	100.0	

Prodwd

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	.5	.5	.5
	1.13	2	1.0	1.0	1.5
	1.38	1	.5	.5	2.0
	1.88	3	1.5	1.5	3.4
	2.00	6	2.9	2.9	6.4
	2.25	6	2.9	2.9	9.3
	2.38	3	1.5	1.5	10.8
	2.50	11	5.4	5.4	16.2
	2.63	6	2.9	2.9	19.1
	2.75	5	2.5	2.5	21.6

	2.88	8	3.9	3.9	25.5
	3.00	25	12.3	12.3	37.7
	3.13	15	7.4	7.4	45.1
	3.25	15	7.4	7.4	52.5
	3.38	13	6.4	6.4	58.8
	3.50	14	6.9	6.9	65.7
	3.63	10	4.9	4.9	70.6
	3.75	17	8.3	8.3	78.9
	3.88	7	3.4	3.4	82.4
	4.00	20	9.8	9.8	92.2
	4.13	1	.5	.5	92.6
	4.25	2	1.0	1.0	93.6
	4.38	4	2.0	2.0	95.6
	4.50	2	1.0	1.0	96.6
	4.63	5	2.5	2.5	99.0
	4.75	1	.5	.5	99.5
	5.00	1	.5	.5	100.0
	Total	204	100.0	100.0	

Prode

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	1.0	1.0	1.0
	1.25	1	.5	.5	1.5
	1.88	2	1.0	1.0	2.5
	2.00	2	1.0	1.0	3.4
	2.25	4	2.0	2.0	5.4
	2.38	3	1.5	1.5	6.9
	2.50	3	1.5	1.5	8.3
	2.63	2	1.0	1.0	9.3
	2.75	4	2.0	2.0	11.3

	2.88	6	2.9	2.9	14.2
	3.00	14	6.9	6.9	21.1
	3.13	11	5.4	5.4	26.5
	3.25	12	5.9	5.9	32.4
	3.38	16	7.8	7.8	40.2
	3.50	12	5.9	5.9	46.1
	3.63	20	9.8	9.8	55.9
	3.75	17	8.3	8.3	64.2
	3.88	7	3.4	3.4	67.6
	4.00	34	16.7	16.7	84.3
	4.13	7	3.4	3.4	87.7
	4.25	6	2.9	2.9	90.7
	4.38	5	2.5	2.5	93.1
	4.50	2	1.0	1.0	94.1
	4.63	1	.5	.5	94.6
	4.75	3	1.5	1.5	96.1
	5.00	8	3.9	3.9	100.0
	Total	204	100.0	100.0	

Prodv

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	5	2.5	2.5	2.5
	1.38	2	1.0	1.0	3.4
	1.50	1	.5	.5	3.9
	1.63	1	.5	.5	4.4
	1.75	2	1.0	1.0	5.4
	1.88	2	1.0	1.0	6.4
	2.00	10	4.9	4.9	11.3
	2.13	3	1.5	1.5	12.7
	2.25	10	4.9	4.9	17.6

	2.38	6	2.9	2.9	20.6
	2.50	4	2.0	2.0	22.5
	2.63	8	3.9	3.9	26.5
	2.75	9	4.4	4.4	30.9
	2.88	10	4.9	4.9	35.8
	3.00	34	16.7	16.7	52.5
	3.13	17	8.3	8.3	60.8
	3.25	14	6.9	6.9	67.6
	3.38	11	5.4	5.4	73.0
	3.50	6	2.9	2.9	76.0
	3.63	9	4.4	4.4	80.4
	3.75	7	3.4	3.4	83.8
	3.88	6	2.9	2.9	86.8
	4.00	18	8.8	8.8	95.6
	4.13	1	.5	.5	96.1
	4.25	1	.5	.5	96.6
	4.50	1	.5	.5	97.1
	4.63	1	.5	.5	97.5
	4.75	2	1.0	1.0	98.5
	4.88	2	1.0	1.0	99.5
	5.00	1	.5	.5	100.0
	Total	204	100.0	100.0	

unprodf2f

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	1.0	1.0	1.0
	1.25	1	.5	.5	1.5
	2.00	4	2.0	2.0	3.4
	2.13	2	1.0	1.0	4.4
	2.25	1	.5	.5	4.9
	2.50	3	1.5	1.5	6.4
	2.63	1	.5	.5	6.9
	2.75	3	1.5	1.5	8.3

	3.00	23	11.3	11.3	19.6
	3.13	4	2.0	2.0	21.6
	3.25	9	4.4	4.4	26.0
	3.38	6	2.9	2.9	28.9
	3.50	7	3.4	3.4	32.4
	3.63	11	5.4	5.4	37.7
	3.75	13	6.4	6.4	44.1
	3.88	12	5.9	5.9	50.0
	4.00	32	15.7	15.7	65.7
	4.13	12	5.9	5.9	71.6
	4.25	6	2.9	2.9	74.5
	4.38	11	5.4	5.4	79.9
	4.50	2	1.0	1.0	80.9
	4.63	6	2.9	2.9	83.8
	4.75	3	1.5	1.5	85.3
	4.88	7	3.4	3.4	88.7
	5.00	21	10.3	10.3	99.0
	6.00	2	1.0	1.0	100.0
	Total	204	100.0	100.0	

Unprodt

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	1.0	1.0	1.0
	1.50	1	.5	.5	1.5
	1.88	1	.5	.5	2.0
	2.00	2	1.0	1.0	2.9
	2.50	2	1.0	1.0	3.9
	2.63	5	2.5	2.5	6.4
	2.75	1	.5	.5	6.9
	2.88	3	1.5	1.5	8.3

	3.00	20	9.8	9.8	18.1
	3.13	2	1.0	1.0	19.1
	3.25	5	2.5	2.5	21.6
	3.38	10	4.9	4.9	26.5
	3.50	11	5.4	5.4	31.9
	3.63	12	5.9	5.9	37.7
	3.75	18	8.8	8.8	46.6
	3.88	12	5.9	5.9	52.5
	4.00	31	15.2	15.2	67.6
	4.13	9	4.4	4.4	72.1
	4.25	6	2.9	2.9	75.0
	4.38	3	1.5	1.5	76.5
	4.50	3	1.5	1.5	77.9
	4.63	2	1.0	1.0	78.9
	4.75	8	3.9	3.9	82.8
	4.88	2	1.0	1.0	83.8
	5.00	26	12.7	12.7	96.6
	5.63	1	.5	.5	97.1
	6.00	6	2.9	2.9	100.0
	Total	204	100.0	100.0	

Unprodt

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	1.0	1.0	1.0
	1.50	1	.5	.5	1.5
	1.88	1	.5	.5	2.0
	2.00	2	1.0	1.0	2.9
	2.50	2	1.0	1.0	3.9
	2.63	5	2.5	2.5	6.4
	2.75	1	.5	.5	6.9
	2.88	3	1.5	1.5	8.3

	3.00	20	9.8	9.8	18.1
	3.13	2	1.0	1.0	19.1
	3.25	5	2.5	2.5	21.6
	3.38	10	4.9	4.9	26.5
	3.50	11	5.4	5.4	31.9
	3.63	12	5.9	5.9	37.7
	3.75	18	8.8	8.8	46.6
	3.88	12	5.9	5.9	52.5
	4.00	31	15.2	15.2	67.6
	4.13	9	4.4	4.4	72.1
	4.25	6	2.9	2.9	75.0
	4.38	3	1.5	1.5	76.5
	4.50	3	1.5	1.5	77.9
	4.63	2	1.0	1.0	78.9
	4.75	8	3.9	3.9	82.8
	4.88	2	1.0	1.0	83.8
	5.00	26	12.7	12.7	96.6
	5.63	1	.5	.5	97.1
	6.00	6	2.9	2.9	100.0
	Total	204	100.0	100.0	

Unprodwd

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	1.0	1.0	1.0
	1.50	1	.5	.5	1.5
	1.88	1	.5	.5	2.0
	2.00	6	2.9	2.9	4.9
	2.13	2	1.0	1.0	5.9
	2.25	3	1.5	1.5	7.4
	2.38	2	1.0	1.0	8.3

	2.50	4	2.0	2.0	10.3
	2.63	4	2.0	2.0	12.3
	2.75	3	1.5	1.5	13.7
	2.88	4	2.0	2.0	15.7
	3.00	34	16.7	16.7	32.4
	3.13	3	1.5	1.5	33.8
	3.25	9	4.4	4.4	38.2
	3.38	11	5.4	5.4	43.6
	3.50	10	4.9	4.9	48.5
	3.63	9	4.4	4.4	52.9
	3.75	13	6.4	6.4	59.3
	3.88	7	3.4	3.4	62.7
	4.00	24	11.8	11.8	74.5
	4.13	3	1.5	1.5	76.0
	4.25	3	1.5	1.5	77.5
	4.38	2	1.0	1.0	78.4
	4.50	3	1.5	1.5	79.9
	4.63	3	1.5	1.5	81.4
	4.75	5	2.5	2.5	83.8
	4.88	1	.5	.5	84.3
	5.00	29	14.2	14.2	98.5
	6.00	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

Unprode

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	3	1.5	1.5	1.5
	1.38	2	1.0	1.0	2.5
	1.75	1	.5	.5	2.9
	1.88	1	.5	.5	3.4
	2.00	4	2.0	2.0	5.4
	2.13	2	1.0	1.0	6.4
	2.38	3	1.5	1.5	7.8

	2.50	7	3.4	3.4	11.3
	2.63	5	2.5	2.5	13.7
	2.75	3	1.5	1.5	15.2
	2.88	5	2.5	2.5	17.6
	3.00	19	9.3	9.3	27.0
	3.13	5	2.5	2.5	29.4
	3.25	10	4.9	4.9	34.3
	3.38	11	5.4	5.4	39.7
	3.50	10	4.9	4.9	44.6
	3.63	8	3.9	3.9	48.5
	3.75	16	7.8	7.8	56.4
	3.88	10	4.9	4.9	61.3
	4.00	31	15.2	15.2	76.5
	4.13	4	2.0	2.0	78.4
	4.25	1	.5	.5	78.9
	4.38	3	1.5	1.5	80.4
	4.50	3	1.5	1.5	81.9
	4.63	4	2.0	2.0	83.8
	4.75	3	1.5	1.5	85.3
	5.00	29	14.2	14.2	99.5
	6.00	1	.5	.5	100.0
	Total	204	100.0	100.0	

Unprodv

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	1.0	1.0	1.0
	1.88	1	.5	.5	1.5
	2.00	4	2.0	2.0	3.4
	2.13	1	.5	.5	3.9
	2.38	2	1.0	1.0	4.9
	2.50	3	1.5	1.5	6.4
	2.63	3	1.5	1.5	7.8

	2.75	4	2.0	2.0	9.8
	2.88	4	2.0	2.0	11.8
	3.00	34	16.7	16.7	28.4
	3.13	2	1.0	1.0	29.4
	3.25	5	2.5	2.5	31.9
	3.38	4	2.0	2.0	33.8
	3.50	8	3.9	3.9	37.7
	3.63	12	5.9	5.9	43.6
	3.75	12	5.9	5.9	49.5
	3.88	16	7.8	7.8	57.4
	4.00	30	14.7	14.7	72.1
	4.13	6	2.9	2.9	75.0
	4.25	3	1.5	1.5	76.5
	4.38	3	1.5	1.5	77.9
	4.50	4	2.0	2.0	79.9
	4.63	1	.5	.5	80.4
	4.75	1	.5	.5	80.9
	4.88	2	1.0	1.0	81.9
	5.00	31	15.2	15.2	97.1
	5.13	1	.5	.5	97.5
	6.00	5	2.5	2.5	100.0
	Total	204	100.0	100.0	

APPENDIX E

Channel Preference Rankings Mean Determination

Face-to-face	GenTBB	GenXM
Private & conf.	Mean 1.37	Mean 1.41
Routine & proc.	Mean 3.67	Mean 3.51
Time-sensitive	Mean 2.99	Mean 2.99
Training	Mean 1.9 0	Mean 1.80
Compensation	Mean 2.87	Mean 2.86

Telephone	GenTBB	GenXM
Private & conf.	Mean 2.95	Mean 2.95
Routine & proc.	Mean 3.84	Mean 3.64
Time-sensitive	Mean 2.13	Mean 2.08
Training	Mean 4.54	Mean 4.25
Compensation	Mean 4.22	Mean 4.08

Written Document	GenTBB	GenXM
Private & conf.	Mean 2.61	Mean 2.86
Routine & proc.	Mean 2.43	Mean 2.62
Time-sensitive	Mean 3.81	Mean 3.68
Training	Mean 3.29	Mean 3.53
Compensation	Mean 1.84	Mean 2.05

Electronic Media	GenTBB	GenXM
Private & conf.	Mean 3.5	Mean 3.32
Routine & proc.	Mean 1.69	Mean 1.52
Time-sensitive	Mean 2.00	Mean 1.92
Training	Mean 3.45	Mean 3.15
Compensation	Mean 2.36	Mean 2.45

Virtual Media	GenTBB	GenXM
Private & conf.	Mean 4.52	Mean 4.41
Routine & proc.	Mean 3.39	Mean 3.64
Time-sensitive	Mean 3.98	Mean 4.21
Training	Mean 2.05	Mean 2.21
Compensation	Mean 3.66	Mean 3.56

Report

Generation		Private and Confidential Information : Face-to-Face	Private and Confidential Information : Telephone	Private and Confidential Information : Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Private and Confidential Information : Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Private and Confidential Information : Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)
GenTBB	Mean	1.37	2.95	2.61	3.50	4.52
	N	119	119	119	119	119
	Std. Deviation	.812	1.016	1.106	1.032	.882
GenXM	Mean	1.41	2.95	2.86	3.32	4.41
	N	85	85	85	85	85
	Std. Deviation	.821	1.057	1.216	1.167	.955
Total	Mean	1.39	2.95	2.71	3.43	4.48
	N	204	204	204	204	204
	Std. Deviation	.814	1.030	1.157	1.092	.912

Report

Generation		Routine and Procedural Information : Face-to-Face	Routine and Procedural Information : Telephone	Routine and Procedural Information : Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Routine and Procedural Information : Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Routine and Procedural Information : Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD
GenTBB	Mean	3.67	3.84	2.43	1.69	3.39
	N	119	119	119	119	119
	Std. Deviation	1.403	.873	.944	1.141	1.283
GenXM	Mean	3.51	3.64	2.62	1.52	3.64
	N	85	85	85	85	85
	Std. Deviation	1.469	1.010	.976	1.053	1.213
Total	Mean	3.60	3.75	2.51	1.62	3.49
	N	204	204	204	204	204
	Std. Deviation	1.430	.936	.960	1.106	1.257

Report

Generation		Time-Sensitive Information : Face-to-Face	Time-Sensitive Information : Telephone	Time-Sensitive Information : Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Time-Sensitive Information : Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Time-Sensitive Information : Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)
GenTBB	Mean	2.99	2.13	3.81	2.00	3.98
	N	119	119	119	119	119
	Std. Deviation	1.581	.947	.932	1.142	1.049
GenXM	Mean	2.99	2.08	3.68	1.92	4.21
	N	85	85	85	85	85
	Std. Deviation	1.484	.916	1.003	1.038	1.036
Total	Mean	2.99	2.11	3.75	1.97	4.08
	N	204	204	204	204	204
	Std. Deviation	1.538	.932	.962	1.098	1.048

Report

Generation		Training Information : Face-to-Face	Training Information : Telephone	Training Information : Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Training Information : Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Training Information : Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)
GenTBB	Mean	1.90	4.54	3.29	3.45	2.05
	N	119	119	119	119	119
	Std. Deviation	1.291	.831	.875	3.984	1.126
GenXM	Mean	1.80	4.25	3.53	3.15	2.21
	N	85	85	85	85	85
	Std. Deviation	1.252	.999	1.053	1.129	1.135
Total	Mean	1.86	4.42	3.39	3.32	2.12
	N	204	204	204	204	204
	Std. Deviation	1.273	.914	.958	3.127	1.130

Report

Generation		Compensation and Benefits Information : Face-to-Face	Compensation and Benefits Information : Telephone	Compensation and Benefits Information : Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Compensation and Benefits Information : Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Compensation and Benefits Information : Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)
GenTBB	Mean	2.87	4.22	1.84	2.36	3.66
	N	119	119	119	119	119
	Std. Deviation	1.418	.931	.974	1.103	1.116
GenXM	Mean	2.86	4.08	2.05	2.45	3.56
	N	85	85	85	85	85
	Std. Deviation	1.364	1.060	1.272	1.230	1.117
Total	Mean	2.87	4.16	1.93	2.40	3.62
	N	204	204	204	204	204
	Std. Deviation	1.392	.987	1.110	1.155	1.115

Report

Generation		Private and Confidential Information : Face-to-Face	Routine and Procedural Information : Face-to-Face	Time-Sensitive Information : Face-to-Face	Training Information : Face-to-Face	Compensation and Benefits Information : Face-to-Face
GenTBB	Mean	1.37	3.67	2.99	1.90	2.87
	N	119	119	119	119	119
	Std. Deviation	.812	1.403	1.581	1.291	1.418
GenXM	Mean	1.41	3.51	2.99	1.80	2.86
	N	85	85	85	85	85
	Std. Deviation	.821	1.469	1.484	1.252	1.364
Total	Mean	1.39	3.60	2.99	1.86	2.87
	N	204	204	204	204	204
	Std. Deviation	.814	1.430	1.538	1.273	1.392

Report

Generation		Private and Confidential Information : Telephone	Routine and Procedural Information : Telephone	Time-Sensitive Information : Telephone	Training Information : Telephone	Compensation and Benefits Information : Telephone
GenTBB	Mean	2.95	3.84	2.13	4.54	4.22
	N	119	119	119	119	119
	Std. Deviation	1.016	.873	.947	.831	.931
GenXM	Mean	2.95	3.64	2.08	4.25	4.08
	N	85	85	85	85	85
	Std. Deviation	1.057	1.010	.916	.999	1.060
Total	Mean	2.95	3.75	2.11	4.42	4.16
	N	204	204	204	204	204
	Std. Deviation	1.030	.936	.932	.914	.987

Report

Generation		Private and Confidential Information : Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Routine and Procedural Information : Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Time-Sensitive Information : Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Training Information : Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)	Compensation and Benefits Information : Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards)
GenTBB	Mean	2.61	2.43	3.81	3.29	1.84
	N	119	119	119	119	119
	Std. Deviation	1.106	.944	.932	.875	.974
GenXM	Mean	2.86	2.62	3.68	3.53	2.05
	N	85	85	85	85	85
	Std. Deviation	1.216	.976	1.003	1.053	1.272
Total	Mean	2.71	2.51	3.75	3.39	1.93
	N	204	204	204	204	204
	Std. Deviation	1.157	.960	.962	.958	1.110

Report

Generation		Private and Confidential Information : Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Routine and Procedural Information : Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Time-Sensitive Information : Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Training Information : Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)	Compensation and Benefits Information : Electronic Media (e-mail, text, Blackberry, I-M, Internet, Intranet)
GenTBB	Mean	3.50	1.69	2.00	3.45	2.36
	N	119	119	119	119	119
	Std. Deviation	1.032	1.141	1.142	3.984	1.103
GenXM	Mean	3.32	1.52	1.92	3.15	2.45
	N	85	85	85	85	85
	Std. Deviation	1.167	1.053	1.038	1.129	1.230
Total	Mean	3.43	1.62	1.97	3.32	2.40
	N	204	204	204	204	204
	Std. Deviation	1.092	1.106	1.098	3.127	1.155

Report

Generation		Private and Confidential Information : Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)	Routine and Procedural Information : Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD	Time-Sensitive Information : Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)	Training Information : Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)	Compensation and Benefits Information : Virtual Media (teleconferencing, Centra, I-chat, video conferencing, interactive DVD or CD)
GenTBB	Mean	4.52	3.39	3.98	2.05	3.66
	N	119	119	119	119	119
	Std. Deviation	.882	1.283	1.049	1.126	1.116
GenXM	Mean	4.41	3.64	4.21	2.21	3.56
	N	85	85	85	85	85
	Std. Deviation	.955	1.213	1.036	1.135	1.117
Total	Mean	4.48	3.49	4.08	2.12	3.62
	N	204	204	204	204	204
	Std. Deviation	.912	1.257	1.048	1.130	1.115

Rich and Lean Mean Analysis

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
RM	.00	85	2.3729	.61400	.06660	2.2405	2.5054	1.00	4.20
	1.00	119	2.4118	.65188	.05976	2.2934	2.5301	1.00	4.30
	Total	204	2.3956	.63512	.04447	2.3079	2.4833	1.00	4.30
LM	.00	85	2.4776	.57038	.06187	2.3546	2.6007	1.00	4.00
	1.00	119	2.4050	.60560	.05552	2.2951	2.5150	1.00	4.50
	Total	204	2.4353	.59084	.04137	2.3537	2.5169	1.00	4.50

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
RM	Between Groups	.075	1	.075	.185	.668
	Within Groups	81.811	202	.405		
	Total	81.886	203			
LM	Between Groups	.261	1	.261	.748	.388
	Within Groups	70.605	202	.350		
	Total	70.866	203			

APPENDIX F

Regressions and Frequency Analysis for Productive Information

Frequency Analysis

Prod F2F DE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.5	1.5	1.5
	Disagree	21	10.3	10.3	11.8
	Neutral	39	19.1	19.1	30.9
	Agree	99	48.5	48.5	79.4
	Strongly Agree	42	20.6	20.6	100.0
	Total	204	100.0	100.0	

Prod T DE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	4.9	4.9	4.9
	Disagree	38	18.6	18.6	23.5
	Neutral	63	30.9	30.9	54.4
	Agree	83	40.7	40.7	95.1
	Strongly Agree	10	4.9	4.9	100.0
	Total	204	100.0	100.0	

Prod WD DE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.5	1.5	1.5
	Disagree	24	11.8	11.8	13.2
	Neutral	43	21.1	21.1	34.3
	Agree	103	50.5	50.5	84.8
	Strongly Agree	31	15.2	15.2	100.0
	Total	204	100.0	100.0	

Prod E DE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	19	9.3	9.3	10.3
	Neutral	41	20.1	20.1	30.4
	Agree	116	56.9	56.9	87.3
	Strongly Agree	26	12.7	12.7	100.0
	Total	204	100.0	100.0	

Prod V DE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	4.4	4.4	4.4
	Disagree	36	17.6	17.6	22.1
	Neutral	70	34.3	34.3	56.4
	Agree	80	39.2	39.2	95.6
	Strongly Agree	9	4.4	4.4	100.0
	Total	204	100.0	100.0	

Prod F2F DD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	31	15.2	15.2	17.2
	Neutral	57	27.9	27.9	45.1
	Agree	80	39.2	39.2	84.3
	Strongly Agree	32	15.7	15.7	100.0
	Total	204	100.0	100.0	

Prod T DD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	4.9	4.9	4.9
	Disagree	49	24.0	24.0	28.9
	Neutral	63	30.9	30.9	59.8
	Agree	76	37.3	37.3	97.1
	Strongly Agree	6	2.9	2.9	100.0
	Total	204	100.0	100.0	

Prod WD DD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	34	16.7	16.7	19.6
	Neutral	69	33.8	33.8	53.4
	Agree	80	39.2	39.2	92.6
	Strongly Agree	15	7.4	7.4	100.0
	Total	204	100.0	100.0	

Prod E DD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	20	9.8	9.8	11.8
	Neutral	38	18.6	18.6	30.4
	Agree	109	53.4	53.4	83.8
	Strongly Agree	33	16.2	16.2	100.0
	Total	204	100.0	100.0	

Prod V DD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	4.9	4.9	4.9
	Disagree	55	27.0	27.0	31.9
	Neutral	73	35.8	35.8	67.6
	Agree	56	27.5	27.5	95.1
	Strongly Agree	10	4.9	4.9	100.0
	Total	204	100.0	100.0	

Prod F2F EFPW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	3.4	3.4	3.4
	Disagree	41	20.1	20.1	23.5
	Neutral	62	30.4	30.4	53.9
	Agree	78	38.2	38.2	92.2
	Strongly Agree	16	7.8	7.8	100.0
	Total	204	100.0	100.0	

Prod T EFPW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	3.9	3.9	3.9
	Disagree	42	20.6	20.6	24.5
	Neutral	69	33.8	33.8	58.3
	Agree	77	37.7	37.7	96.1
	Strongly Agree	8	3.9	3.9	100.0
	Total	204	100.0	100.0	

Prod WD EFPW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	3.9	3.9	3.9
	Disagree	46	22.5	22.5	26.5
	Neutral	73	35.8	35.8	62.3
	Agree	68	33.3	33.3	95.6
	Strongly Agree	9	4.4	4.4	100.0
	Total	204	100.0	100.0	

Prod E EFPW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	13	6.4	6.4	7.4
	Neutral	23	11.3	11.3	18.6
	Agree	131	64.2	64.2	82.8
	Strongly Agree	35	17.2	17.2	100.0
	Total	204	100.0	100.0	

Prod V EFPW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	5.4	5.4	5.4
	Disagree	39	19.1	19.1	24.5
	Neutral	63	30.9	30.9	55.4
	Agree	79	38.7	38.7	94.1
	Strongly Agree	12	5.9	5.9	100.0
	Total	204	100.0	100.0	

Prod F2F RI

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	4.9	4.9	4.9
	Disagree	53	26.0	26.0	30.9
	Neutral	68	33.3	33.3	64.2
	Agree	60	29.4	29.4	93.6
	Strongly Agree	13	6.4	6.4	100.0
	Total	204	100.0	100.0	

Prod T RI

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	14	6.9	6.9	6.9
	Disagree	78	38.2	38.2	45.1
	Neutral	67	32.8	32.8	77.9
	Agree	39	19.1	19.1	97.1
	Strongly Agree	6	2.9	2.9	100.0
	Total	204	100.0	100.0	

Prod WD RI

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	3.4	3.4	3.4
	Disagree	36	17.6	17.6	21.1
	Neutral	52	25.5	25.5	46.6
	Agree	89	43.6	43.6	90.2
	Strongly Agree	20	9.8	9.8	100.0
	Total	204	100.0	100.0	

Prod E RI

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.5	1.5	1.5
	Disagree	26	12.7	12.7	14.2
	Neutral	41	20.1	20.1	34.3
	Agree	99	48.5	48.5	82.8
	Strongly Agree	35	17.2	17.2	100.0
	Total	204	100.0	100.0	

Prod V RI

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	5.9	5.9	5.9
	Disagree	53	26.0	26.0	31.9
	Neutral	68	33.3	33.3	65.2
	Agree	59	28.9	28.9	94.1
	Strongly Agree	12	5.9	5.9	100.0
	Total	204	100.0	100.0	

Prod F2F ECWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	31	15.2	15.2	18.1
	Neutral	58	28.4	28.4	46.6
	Agree	91	44.6	44.6	91.2
	Strongly Agree	18	8.8	8.8	100.0
	Total	204	100.0	100.0	

Prod T ECWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	4.4	4.4	4.4
	Disagree	41	20.1	20.1	24.5
	Neutral	74	36.3	36.3	60.8
	Agree	77	37.7	37.7	98.5
	Strongly Agree	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

Prod WD ECWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	28	13.7	13.7	16.7
	Neutral	62	30.4	30.4	47.1
	Agree	95	46.6	46.6	93.6
	Strongly Agree	13	6.4	6.4	100.0
	Total	204	100.0	100.0	

Prod E ECWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	15	7.4	7.4	9.3
	Neutral	47	23.0	23.0	32.4
	Agree	111	54.4	54.4	86.8
	Strongly Agree	27	13.2	13.2	100.0
	Total	204	100.0	100.0	

Prod V ECWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	3.9	3.9	3.9
	Disagree	38	18.6	18.6	22.5
	Neutral	75	36.8	36.8	59.3
	Agree	73	35.8	35.8	95.1
	Strongly Agree	10	4.9	4.9	100.0
	Total	204	100.0	100.0	

Prod F2F ECWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	31	15.2	15.2	18.1
	Neutral	58	28.4	28.4	46.6
	Agree	91	44.6	44.6	91.2
	Strongly Agree	18	8.8	8.8	100.0
	Total	204	100.0	100.0	

Prod T ECWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	4.4	4.4	4.4
	Disagree	41	20.1	20.1	24.5
	Neutral	74	36.3	36.3	60.8
	Agree	77	37.7	37.7	98.5
	Strongly Agree	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

Prod WD ECWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	28	13.7	13.7	16.7
	Neutral	62	30.4	30.4	47.1
	Agree	95	46.6	46.6	93.6
	Strongly Agree	13	6.4	6.4	100.0
	Total	204	100.0	100.0	

Prod E ECWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	15	7.4	7.4	9.3
	Neutral	47	23.0	23.0	32.4
	Agree	111	54.4	54.4	86.8
	Strongly Agree	27	13.2	13.2	100.0
	Total	204	100.0	100.0	

Prod V ECWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	3.9	3.9	3.9
	Disagree	38	18.6	18.6	22.5
	Neutral	75	36.8	36.8	59.3
	Agree	73	35.8	35.8	95.1
	Strongly Agree	10	4.9	4.9	100.0
	Total	204	100.0	100.0	

Prod V ECWT

		Frequency	Percent	Valid Percent	Cumulative Percent
	Strongly Disagree	8	3.9	3.9	3.9
	Disagree	38	18.6	18.6	22.5
	Neutral	75	36.8	36.8	59.3
	Agree	73	35.8	35.8	95.1
	Strongly Agree	10	4.9	4.9	100.0

Prod F2F IM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	2.5	2.5	2.5
	Disagree	21	10.3	10.3	12.7
	Neutral	37	18.1	18.1	30.9
	Agree	97	47.5	47.5	78.4
	Strongly Agree	44	21.6	21.6	100.0
	Total	204	100.0	100.0	

Prod T IM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	34	16.7	16.7	19.6
	Neutral	77	37.7	37.7	57.4
	Agree	78	38.2	38.2	95.6
	Strongly Agree	9	4.4	4.4	100.0
	Total	204	100.0	100.0	

Prod WD IM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	3.9	3.9	3.9
	Disagree	35	17.2	17.2	21.1
	Neutral	103	50.5	50.5	71.6
	Agree	51	25.0	25.0	96.6
	Strongly Agree	7	3.4	3.4	100.0
	Total	204	100.0	100.0	

Prod E IM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	3.4	3.4	3.4
	Disagree	30	14.7	14.7	18.1
	Neutral	97	47.5	47.5	65.7
	Agree	58	28.4	28.4	94.1
	Strongly Agree	12	5.9	5.9	100.0
	Total	204	100.0	100.0	

Prod V IM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	6.4	6.4	6.4
	Disagree	50	24.5	24.5	30.9
	Neutral	95	46.6	46.6	77.5
	Agree	43	21.1	21.1	98.5
	Strongly Agree	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

Prod F2F IT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0

	Disagree	14	6.9	6.9	8.8
	Neutral	34	16.7	16.7	25.5
	Agree	96	47.1	47.1	72.5
	Strongly Agree	56	27.5	27.5	100.0
	Total	204	100.0	100.0	

Prod T IT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	28	13.7	13.7	16.7
	Neutral	72	35.3	35.3	52.0
	Agree	87	42.6	42.6	94.6
	Strongly Agree	11	5.4	5.4	100.0
	Total	204	100.0	100.0	

Prod WD IT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	3.4	3.4	3.4
	Disagree	29	14.2	14.2	17.6
	Neutral	102	50.0	50.0	67.6
	Agree	60	29.4	29.4	97.1
	Strongly Agree	6	2.9	2.9	100.0
	Total	204	100.0	100.0	

Prod E IT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	3.4	3.4	3.4
	Disagree	31	15.2	15.2	18.6
	Neutral	95	46.6	46.6	65.2
	Agree	59	28.9	28.9	94.1
	Strongly Agree	12	5.9	5.9	100.0
	Total	204	100.0	100.0	

Prod V IT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	4.9	4.9	4.9
	Disagree	48	23.5	23.5	28.4
	Neutral	101	49.5	49.5	77.9
	Agree	40	19.6	19.6	97.5
	Strongly Agree	5	2.5	2.5	100.0
	Total	204	100.0	100.0	

Prod F2F RS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	3.9	3.9	3.9
	Disagree	39	19.1	19.1	23.0
	Neutral	73	35.8	35.8	58.8
	Agree	59	28.9	28.9	87.7
	Strongly Agree	25	12.3	12.3	100.0
	Total	204	100.0	100.0	

Prod T RS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	3.9	3.9	3.9
	Disagree	55	27.0	27.0	30.9
	Neutral	84	41.2	41.2	72.1
	Agree	50	24.5	24.5	96.6
	Strongly Agree	7	3.4	3.4	100.0
	Total	204	100.0	100.0	

Prod WD RS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	4.4	4.4	4.4
	Disagree	46	22.5	22.5	27.0
	Neutral	90	44.1	44.1	71.1
	Agree	52	25.5	25.5	96.6
	Strongly Agree	7	3.4	3.4	100.0
	Total	204	100.0	100.0	

Prod E RS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	30	14.7	14.7	17.6
	Neutral	85	41.7	41.7	59.3
	Agree	67	32.8	32.8	92.2
	Strongly Agree	16	7.8	7.8	100.0
	Total	204	100.0	100.0	

Prod V RS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	4.9	4.9	4.9
	Disagree	49	24.0	24.0	28.9
	Neutral	102	50.0	50.0	78.9
	Agree	37	18.1	18.1	97.1
	Strongly Agree	6	2.9	2.9	100.0
	Total	204	100.0	100.0	

Linear Regressions

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.143[a]	.020	.016	.78873

a. Predictors: (Constant), GENTBB

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.613	1	2.613	4.201	.042[a]
	Residual	125.662	202	.622		
	Total	128.275	203			

a. Predictors: (Constant), GENTBB

b. Dependent Variable: F2Fproductivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.539	.086		41.366	.000
	GENTBB	-.230	.112	-.143	-2.050	.042

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.539	.086		41.366	.000
	GENTBB	-.230	.112	-.143	-2.050	.042

a. Dependent Variable: F2Fproductivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.124[a]	.015	.010	.77964

a. Predictors: (Constant), GENTBB

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.911	1	1.911	3.143	.078[a]
	Residual	122.783	202	.608		
	Total	124.693	203			

a. Predictors: (Constant), GENTBB

b. Dependent Variable: Tproductivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.181	.085		37.619	.000
	GENTBB	-.196	.111	-.124	-1.773	.078

a. Dependent Variable: Tproductivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.078[a]	.006	.001	.75574

a. Predictors: (Constant), GENTBB

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.706	1	.706	1.236	.268[a]
	Residual	115.371	202	.571		
	Total	116.077	203			

a. Predictors: (Constant), GENTBB

b. Dependent Variable: WDproductivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.306	.082		40.330	.000
	GENTBB	.119	.107	.078	1.112	.268

a. Dependent Variable: WDproductivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.112[a]	.012	.008	.73608

a. Predictors: (Constant), GENXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.384	1	1.384	2.554	.112[a]

	Residual	109.447	202	.542		
	Total	110.830	203			

a. Predictors: (Constant), GENXM

b. Dependent Variable: Eproductivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.671	.067		54.398	.000
	GENXM	.167	.105	.112	1.598	.112

a. Dependent Variable: Eproductivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.069[a]	.005	.000	.80700

a. Predictors: (Constant), GENXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.632	1	.632	.971	.326[a]
	Residual	131.551	202	.651		
	Total	132.184	203			

a. Predictors: (Constant), GENXM

b. Dependent Variable: Vproductivity

Coefficients[a]

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	3.176	.074		42.938	.000
	GENXM	-.113	.115	-.069	-.985	.326

a. Dependent Variable: Vproductivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.089[a]	.008	.003	.985

a. Predictors: (Constant), GenerationXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.574	1	1.574	1.620	.204[a]
	Residual	196.171	202	.971		
	Total	197.745	203			

a. Predictors: (Constant), GenerationXM

b. Dependent Variable: Prod F2F IM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.503	.210		16.685	.000
	GenerationXM	.178	.140	.089	1.273	.204

a. Dependent Variable: Prod F2F IM

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.196[a]	.038	.033	.927

a. Predictors: (Constant), GENXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.903	1	6.903	8.036	.005[a]
	Residual	173.509	202	.859		
	Total	180.412	203			

a. Predictors: (Constant), GENXM

b. Dependent Variable: Prod F2F IT

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.756	.085		44.213	.000
	GENXM	.373	.132	.196	2.835	.005

a. Dependent Variable: Prod F2F IT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.121[a]	.015	.010	1.026

a. Predictors: (Constant), GENXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.151	1	3.151	2.995	.085[a]

	Residual	212.555	202	1.052		
	Total	215.706	203			

a. Predictors: (Constant), GENXM

b. Dependent Variable: Prod F2F RS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.160	.094		33.601	.000
	GENXM	.252	.146	.121	1.731	.085

a. Dependent Variable: Prod F2F RS

APPENDIX G

Regressions and Frequency Analysis for Unproductive Information

Frequency Analysis

UnProd F2F ID

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.5	1.5	1.5
	Disagree	15	7.4	7.4	8.8
	Neautral	35	17.2	17.2	26.0
	Agree	94	46.1	46.1	72.1
	Strongly Agree	54	26.5	26.5	98.5
	Not Applicable. We do not use face-to-face communication in my organization.	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

UnProd T ID

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	13	6.4	6.4	8.3
	Neutral	29	14.2	14.2	22.5
	Agree	102	50.0	50.0	72.5
	Strongly Agree	50	24.5	24.5	97.1
	Not Applicable. Telephone is not used by my organization.	6	2.9	2.9	100.0
	Total	204	100.0	100.0	

UnProd WD ID

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	20	9.8	9.8	11.8
	Neutral	49	24.0	24.0	35.8
	Agree	81	39.7	39.7	75.5
	Strongly Agree	47	23.0	23.0	98.5
	Not Applicable. Written Documents are not used by my organization.	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

UnProd E ID

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	2.5	2.5	2.5
	Disagree	22	10.8	10.8	13.2
	Neutral	38	18.6	18.6	31.9
	Agree	86	42.2	42.2	74.0
	Strongly Agree	52	25.5	25.5	99.5
	Not Applicable. We do not use electronic media in my organization.	1	.5	.5	100.0
	Total	204	100.0	100.0	

UnProd V ID

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	20	9.8	9.8	10.8
	Neutral	38	18.6	18.6	29.4
	Agree	83	40.7	40.7	70.1
	Strongly Agree	55	27.0	27.0	97.1
	Not Applicable. We do not use virtual media in my organization.	6	2.9	2.9	100.0
	Total	204	100.0	100.0	

UnProd F2F HFPW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.5	1.5	1.5
	Disagree	12	5.9	5.9	7.4
	Neautral	40	19.6	19.6	27.0
	Agree	97	47.5	47.5	74.5
	Strongly Agree	49	24.0	24.0	98.5
	Not Applicable. We do not use face-to-face communication in my organization.	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

UnProd T HFPW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	8	3.9	3.9	4.9
	Neutral	42	20.6	20.6	25.5
	Agree	96	47.1	47.1	72.5
	Strongly Agree	50	24.5	24.5	97.1
	Not Applicable. Telephone is not used by my organization.	6	2.9	2.9	100.0
	Total	204	100.0	100.0	

UnProd WD HFPW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.5	1.5	1.5
	Disagree	23	11.3	11.3	12.7
	Neutral	56	27.5	27.5	40.2
	Agree	73	35.8	35.8	76.0
	Strongly Agree	46	22.5	22.5	98.5
	Not Applicable. Written Documents are not used by my organization.	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

UnProd E HFPW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	3.4	3.4	3.4
	Disagree	28	13.7	13.7	17.2
	Neutral	44	21.6	21.6	38.7
	Agree	77	37.7	37.7	76.5
	Strongly Agree	47	23.0	23.0	99.5
	Not Applicable. We do not use electronic media in my organization.	1	.5	.5	100.0
	Total	204	100.0	100.0	

UnProd V HFPW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	18	8.8	8.8	9.8
	Neutral	50	24.5	24.5	34.3
	Agree	80	39.2	39.2	73.5
	Strongly Agree	48	23.5	23.5	97.1
	Not Applicable. We do not use virtual media in my organization.	6	2.9	2.9	100.0
	Total	204	100.0	100.0	

UnProd F2F II

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	12	5.9	5.9	6.9
	Neautral	52	25.5	25.5	32.4
	Agree	80	39.2	39.2	71.6
	Strongly Agree	55	27.0	27.0	98.5
	Not Applicable. We do not use face-to-face communication in my organization.	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

UnProd T II

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	8	3.9	3.9	4.9
	Neutral	33	16.2	16.2	21.1
	Agree	93	45.6	45.6	66.7
	Strongly Agree	61	29.9	29.9	96.6
	Not Applicable. Telephone is not used by my organization.	7	3.4	3.4	100.0
	Total	204	100.0	100.0	

UnProd WD II

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	2.5	2.5	2.5
	Disagree	24	11.8	11.8	14.2
	Neutral	66	32.4	32.4	46.6
	Agree	62	30.4	30.4	77.0
	Strongly Agree	44	21.6	21.6	98.5
	Not Applicable. Written Documents are not used by my organization.	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

UnProd E II

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	2.5	2.5	2.5
	Disagree	27	13.2	13.2	15.7
	Neutral	38	18.6	18.6	34.3
	Agree	80	39.2	39.2	73.5
	Strongly Agree	52	25.5	25.5	99.0
	Not Applicable. We do not use electronic media in my organization.	2	1.0	1.0	100.0
	Total	204	100.0	100.0	

UnProd V II

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	15	7.4	7.4	9.3
	Neutral	52	25.5	25.5	34.8
	Agree	76	37.3	37.3	72.1
	Strongly Agree	51	25.0	25.0	97.1
	Not Applicable. We do not use virtual media in my organization.	6	2.9	2.9	100.0
	Total	204	100.0	100.0	

UnProd F2F HCWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	13	6.4	6.4	7.4
	Neautral	42	20.6	20.6	27.9
	Agree	82	40.2	40.2	68.1
	Strongly Agree	61	29.9	29.9	98.0
	Not Applicable. We do not use face-to-face communication in my organization.	4	2.0	2.0	100.0
	Total	204	100.0	100.0	

UnProd T HCWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.5	1.5	1.5
	Disagree	8	3.9	3.9	5.4
	Neutral	45	22.1	22.1	27.5
	Agree	85	41.7	41.7	69.1
	Strongly Agree	56	27.5	27.5	96.6
	Not Applicable. Telephone is not used by my organization.	7	3.4	3.4	100.0
	Total	204	100.0	100.0	

UnProd WD HCWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	25	12.3	12.3	14.2
	Neutral	55	27.0	27.0	41.2
	Agree	72	35.3	35.3	76.5
	Strongly Agree	45	22.1	22.1	98.5
	Not Applicable. Written Documents are not used by my organization.	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

UnProd E HCWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	19	9.3	9.3	12.3
	Neutral	49	24.0	24.0	36.3
	Agree	83	40.7	40.7	77.0
	Strongly Agree	45	22.1	22.1	99.0
	Not Applicable. We do not use electronic media in my organization.	2	1.0	1.0	100.0
	Total	204	100.0	100.0	

UnProd V HCWT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	16	7.8	7.8	8.8
	Neutral	52	25.5	25.5	34.3
	Agree	84	41.2	41.2	75.5
	Strongly Agree	44	21.6	21.6	97.1
	Not Applicable. We do not use virtual media in my organization.	6	2.9	2.9	100.0
	Total	204	100.0	100.0	

UnProd F2F DM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	2.5	2.5	2.5
	Disagree	21	10.3	10.3	12.7
	Neautral	51	25.0	25.0	37.7
	Agree	70	34.3	34.3	72.1
	Strongly Agree	54	26.5	26.5	98.5
	Not Applicable. We do not use face-to-face communication in my organization.	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

UnProd T DM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	2.5	2.5	2.5
	Disagree	15	7.4	7.4	9.8
	Neutral	71	34.8	34.8	44.6
	Agree	64	31.4	31.4	76.0
	Strongly Agree	42	20.6	20.6	96.6
	Not Applicable. Telephone is not used by my organization.	7	3.4	3.4	100.0
	Total	204	100.0	100.0	

UnProd WD DM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.5	1.5	1.5
	Disagree	23	11.3	11.3	12.7
	Neutral	78	38.2	38.2	51.0
	Agree	58	28.4	28.4	79.4
	Strongly Agree	39	19.1	19.1	98.5
	Not Applicable. Written Documents are not used by my organization.	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

UnProd W DM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	23	11.3	11.3	14.2
	Neutral	69	33.8	33.8	48.0
	Agree	69	33.8	33.8	81.9
	Strongly Agree	36	17.6	17.6	99.5
	Not Applicable. We do not use electronic media in my organization.	1	.5	.5	100.0
	Total	204	100.0	100.0	

UnProd V DM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	19	9.3	9.3	11.3
	Neutral	74	36.3	36.3	47.5
	Agree	62	30.4	30.4	77.9
	Strongly Agree	40	19.6	19.6	97.5
	Not Applicable. We do not use virtual media in my organization.	5	2.5	2.5	100.0
	Total	204	100.0	100.0	

UnProd F2F DT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	26	12.7	12.7	15.7
	Neautral	62	30.4	30.4	46.1
	Agree	63	30.9	30.9	77.0
	Strongly Agree	44	21.6	21.6	98.5
	Not Applicable. We do not use face-to-face communication in my organization.	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

UnProd T DT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	22	10.8	10.8	12.7
	Neutral	77	37.7	37.7	50.5
	Agree	57	27.9	27.9	78.4
	Strongly Agree	37	18.1	18.1	96.6
	Not Applicable. Telephone is not used by my organization.	7	3.4	3.4	100.0
	Total	204	100.0	100.0	

UnProd WD DT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	23	11.3	11.3	12.3
	Neutral	81	39.7	39.7	52.0
	Agree	52	25.5	25.5	77.5
	Strongly Agree	43	21.1	21.1	98.5
	Not Applicable. Written Documents are not used by my organization.	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

UnProd E DT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	3.4	3.4	3.4
	Disagree	24	11.8	11.8	15.2
	Neutral	84	41.2	41.2	56.4
	Agree	51	25.0	25.0	81.4
	Strongly Agree	37	18.1	18.1	99.5
	Not Applicable. We do not use electronic media in my organization.	1	.5	.5	100.0
	Total	204	100.0	100.0	

UnProd V DT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	15	7.4	7.4	9.3
	Neutral	77	37.7	37.7	47.1
	Agree	62	30.4	30.4	77.5
	Strongly Agree	41	20.1	20.1	97.5
	Not Applicable. We do not use virtual media in my organization.	5	2.5	2.5	100.0
	Total	204	100.0	100.0	

UnProd F2F IS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	10	4.9	4.9	6.9
	Neautral	52	25.5	25.5	32.4
	Agree	63	30.9	30.9	63.2
	Strongly Agree	71	34.8	34.8	98.0
	Not Applicable. We do not use face-to-face communication in my organization.	4	2.0	2.0	100.0
	Total	204	100.0	100.0	

Unprod T IS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	10	4.9	4.9	5.9
	Neutral	49	24.0	24.0	29.9
	Agree	80	39.2	39.2	69.1
	Strongly Agree	56	27.5	27.5	96.6
	Not Applicable. Telephone is not used by my organization.	7	3.4	3.4	100.0
	Total	204	100.0	100.0	

UnProd WD IS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.5	1.5	1.5
	Disagree	16	7.8	7.8	9.3
	Neutral	68	33.3	33.3	42.6
	Agree	69	33.8	33.8	76.5
	Strongly Agree	45	22.1	22.1	98.5
	Not Applicable. Written Documents are not used by my organization.	3	1.5	1.5	100.0
	Total	204	100.0	100.0	

UnProd E IS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	2.5	2.5	2.5
	Disagree	21	10.3	10.3	12.7
	Neutral	56	27.5	27.5	40.2
	Agree	73	35.8	35.8	76.0
	Strongly Agree	47	23.0	23.0	99.0
	Not Applicable. We do not use electronic media in my organization.	2	1.0	1.0	100.0
	Total	204	100.0	100.0	

UnProd V IS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.0	2.0	2.0
	Disagree	10	4.9	4.9	6.9
	Neutral	59	28.9	28.9	35.8
	Agree	77	37.7	37.7	73.5
	Strongly Agree	47	23.0	23.0	96.6
	Not Applicable. We do not use virtual media in my organization.	7	3.4	3.4	100.0
	Total	204	100.0	100.0	

Linear Regressions

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.020[a]	.000	-.005	.83688

a. Predictors: (Constant), GENXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.055	1	.055	.078	.780[a]
	Residual	141.475	202	.700		
	Total	141.530	203			

a. Predictors: (Constant), GENXM
b. Dependent Variable: F2Funproductivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.864	.077		50.365	.000
	GENXM	-.033	.119	-.020	-.280	.780

a. Dependent Variable: F2Funproductivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.001[a]	.000	-.005	.87068

a. Predictors: (Constant), GENXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.000	1	.000	.000	.985[a]
	Residual	153.131	202	.758		
	Total	153.132	203			

a. Predictors: (Constant), GENXM
b. Dependent Variable: Tunproductivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.965	.080		49.674	.000
	GENXM	-.002	.124	-.001	-.019	.985

a. Dependent Variable: Tunproductivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.031[a]	.001	-.004	.96768

a. Predictors: (Constant), GENXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.186	1	.186	.198	.657[a]
	Residual	189.155	202	.936		
	Total	189.340	203			

a. Predictors: (Constant), GENXM

b. Dependent Variable: WDunproductivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.682	.089		41.511	.000
	GENXM	-.061	.137	-.031	-.445	.657

a. Dependent Variable: WDunproductivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.070[a]	.005	.000	.95908

a. Predictors: (Constant), GENXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.914	1	.914	.994	.320[a]
	Residual	185.807	202	.920		
	Total	186.722	203			

a. Predictors: (Constant), GENXM

b. Dependent Variable: Eunproductivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.743	.088		42.572	.000
	GENXM	-.136	.136	-.070	-.997	.320

a. Dependent Variable: Eunproductivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.018[a]	.000	-.005	.94452

a. Predictors: (Constant), GENXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.061	1	.061	.068	.795[a]
	Residual	180.209	202	.892		
	Total	180.270	203			

a. Predictors: (Constant), GENXM
b. Dependent Variable: Vunproductivity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.830	.087		44.237	.000
	GENXM	-.035	.134	-.018	-.261	.795

a. Dependent Variable: Vunproductivity

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.065[a]	.004	-.001	1.076

a. Predictors: (Constant), GENXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.988	1	.988	.854	.356[a]
	Residual	233.718	202	1.157		
	Total	234.706	203			

a. Predictors: (Constant), GENXM
b. Dependent Variable: UnProd F2F DM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.824	.099		38.776	.000
	GENXM	-.141	.153	-.065	-.924	.356

a. Dependent Variable: UnProd F2F DM

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.017[a]	.000	-.005	1.097

a. Predictors: (Constant), GENXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.068	1	.068	.056	.813[a]
	Residual	242.971	202	1.203		
	Total	243.039	203			

a. Predictors: (Constant), GENXM
b. Dependent Variable: UnProd F2F DT

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.613	.101		35.941	.000
	GENXM	-.037	.156	-.017	-.237	.813

a. Dependent Variable: UnProd F2F DT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.057[a]	.003	-.002	1.030

a. Predictors: (Constant), GENXM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.706	1	.706	.666	.415[a]
	Residual	214.171	202	1.060		
	Total	214.877	203			

a. Predictors: (Constant), GENXM
b. Dependent Variable: UnProd F2F IS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.025	.094		42.644	.000
	GENXM	-.119	.146	-.057	-.816	.415

a. Dependent Variable: UnProd F2F IS

VITA

Eva Lynn Cowell was born in Greeneville, SC. She was raised in south and central Florida before settling in East Tennessee. She earned her degrees from The University of Tennessee, Knoxville. First her BA is Sociology, then returning as an adult student, her MS and PhD in Business Administration. Demonstrating an inner entrepreneurial spirit, she spent the bulk of her professional career in retail management while running a variety of other businesses around her school and work schedules. She loves the “a-ha” moments as a life-long learner, as well as the ones she witnesses in her students. She currently owns her own company and teaches at The University of Tennessee, Knoxville as she pursues a permanent faculty position.