

Discovering Workplace Motivators for the Millennial Generation of IT Employees

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ABSTRACT

This paper provides an overview on motivational research and describes the research methodology and approach that was used to identify the workplace rewards and motivators that the youngest generation of employees, the millennial generation or generation Y, finds attractive in organizations looking to hire them for fulltime Information Technology (IT) positions. Preliminary findings from a pilot study conducted at Purdue University are shared.

Categories and Subject Descriptors

K.7.1 [Computing Milieux]: The Computing Profession – Occupations.

General Terms

Management, Measurement, Design, Economics, Experimentation, Human Factors.

Keywords

Information Technology, Human Resources, Millennial, Generation Y, Motivators, Rewards

1. INTRODUCTION

Previous generations of employees entered the workforce with the expectations of having one employer their entire career, yearly predicable raises, promotions through seniority, and retiring with a pension and lifelong healthcare. Times have changed and these motivators are no longer financially or organizationally feasible. Additionally, what motivated the previous generations of employees to work hard or at one particular employer over another may not be considered important to the millennial generation. Organizations looking to attract and retain this new generation of employees will need to take a close look at their total benefits package including pay, benefits, learning and development opportunities, and the work environment.

This research aimed to develop and test a methodology that could be used to identify the motivating factors that the millennial generation prefers when seeking full-time employment in IT. The

millennial generation is the group of individuals born on or after 1980 and first entered the workforce in 2004 (Hershatter & Epstein, 2010). According to Trunk (2007), there are “76 million members of Generation Y” (p.1). As of 2010, 35 million millennials were employed in the United State of America and by 2014 this number is projected to be at 58 million (Sujansky & Ferri-Reed, 2010). Organizations can benefit from this research by using it as a stepping-stone to further explore how they can begin to shift their company’s approach to rewarding the newest generation of employees.

The research methodology was based off of work originally developed by researchers This and Lippitt which included a Workplace Motivation Checklist containing 25 motivational attributes. Dated motivators were removed and current motivational attributes were added. The methodology expanded on this previous research by adding four rank order type questions and four dichotomous questions within a total rewards framework.

Following the development of the research methodology, a pilot study was conducted at Purdue University by means of a web-based survey. The study was distributed to students currently working part time as IT employees for Purdue University departments or enrolled as juniors or seniors majoring in Purdue University’s College of Technology Computer Information Technology or Computer Graphics Technology departments. The study was also distributed through email, discussion boards, and Facebook groups to full-time IT professionals working throughout the state of Indiana via various professional networks such as the Association of Information Technology Professionals East Central Indiana Chapter (AITPECI), DeveloperTown, StartupDigest, Indy Java Users Group, and VergeIndy. The survey restricted participation to only individuals that would be classified as the millennial generation (individuals born between 1980 and 2000) and to those individuals who have full-time IT careers or intend to pursue full-time IT employment in the future.

2. EXISTING RESEARCH

2.1 Workplace Rewards and Motivators

What motivates generations has been an ongoing discussion for decades. One can recognize that each generation is perceived differently by looking at the various generational stereotypes that exist today. Matures or traditionalists are those individuals born between 1922 and 1945 and are said to value conformity and sacrifice, but are risk adverse and resistant to change (Clare, 2009). Boomers or Baby Boomers were born between 1946 and 1963 and are believed to be optimistic and value personal growth, but are idealists (Clare, 2009). Generation X, or Xers, are born between 1964 and early 1980s. They are said to be techno-

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Conference '12, October 11-13, 2012, Calgary, Alberta, Canada.
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literate, but are independent and value their needs before their employers (Clare, 2009).

Millennials, the last generation to enter the workforce, were born between the early 1980s and 2000 (Clare, 2009). They are thought to be sociable, street smart, and eager to learn, but expect rewards for just showing up and lack loyalty (Clare, 2009). Millennials are “accustomed to receiving a great deal of praise from parents and teachers and some have a hard time accepting seemingly negative feedback” (Sujansky & Ferri-Reed, 2010, p. 14).

Although anecdotal information tends to dominate the popular press, there has been some empirical research conducted that help to identify what motivates the different generations of employees in the workforce. Additionally, some research has been replicated since the 1960s that provides valuable insight into possible motivational differences between generations.

Finally, much of the research identified focuses on college or university graduates and what motivators they identify as important. Very little research identifies specific motivators for a particular career type. A review of two studies that examine motivators for high-tech employees will help to identify if particular motivators should be used for recruiting and retaining university graduates pursuing full-time Information Technology (IT) employment.

2.2 Motivational Variations Between Generations

In order to understand how motivational factors have changed over the decades and across different generations of employees, one must examine how motivational factors vary across generations. In one study, researchers Jurkiewicz and Brown (1998) indicated they didn't believe generational cohorts were valid predictors of motivation. In the overall Chi-Square analysis, only four of the 15 attributes exhibited significance in their analysis (Jurkiewicz & Brown, 1998). They believe that “It appears likely that life stages more so than generational cohort explain employee motivation at work.” (Jurkiewicz & Brown, 1998, p. 29)

In another research study examining the motivational factors, among other things, of Boomers and GenX, Smola and Sutton (2002) indicate their “results suggest that generational work values do differ” (p. 363). Smola and Sutton (2002) found that “Analysis of the 20 items of this study support these assessments and statistical analysis suggests that Gen X-ers work values are significantly different from those of Baby Boomers.” (Smola & Sutton, 2002, p. 378)

James Westerman and Jeanne Yamamura conducted a similar study of generational differences in work environment fit and their ability to retain staff between Boomers and Generation X (Westerman & Yamamura, 2007). In their study, the combined Generation X and Y into a single cohort for purposes of further analysis and hypothesis testing as their t-tests confirmed the lack of significant differences between the two generations (Westerman & Yamamura, 2007). The “primary finding of this study is that work environment fit (specifically goal orientation and system fit) is significantly predictive of employee outcomes for younger generation employees” (Westerman & Yamamura, 2007, p. 156). For Generation X and Y, goal orientation is a primary factor in employee job satisfaction and their intention to remain, but not for Boomers (Westerman & Yamamura, 2007).

Although Westerman and Yamamura argue that they perceive that Generation Y is no different than Generation X, there are researchers that have focused research strictly on the Generation Y or the millennial generation.

A study by Eddy Ng, Linda Schweitzer, and Sean Lyons of 23,413 millennial undergraduate students from across Canada further explored the motivational factors of the millennial generation (Ng, Schweitzer, & Lyons, 2010). Their study focused on career expectations, advancement expectations, pay expectations, and of importance for this review, work attributes. Work attributes included 16 items such as job security, good people to report to, work-life balance, challenging work, etc. (Ng, et al., 2010). Their research showed that “Millennials rated opportunities for advancement as the most desirable work-related attribute” (Ng, et al., 2010, p. 286). This was followed by good people to work with, good people to report to, good training opportunities/developing new skills, and work-life balance (Ng, et al., 2010). Good starting salary was rated at number nine (Ng, et al., 2010).

In a 2011 report, Ian Barford and Patrick Hester discuss the results from a small survey of 18 government employees, six each from Generation Y, X, and Baby Boomers (Barford & Hester, 2011). They discovered that of the five tests that were statistically significant, one involved statistically significant differences between Generation Y and Generation X and between Generation Y and Baby Boomers (Barford & Hester, 2011). Two involved significant differences between Generation Y and Baby Boomers only, and one between Generation Y and Generation X only (Barford & Hester, 2011). These results indicate that there are motivational differences that exist between generations and that Generation X and Generation Y are not motivated by the same factors.

Another study conducted by the Hidden Brain Drain Task Force involved two large-scale nationally representative surveys. This research identified that similarities existed between the Boomer generation and Generation Y (Hewlett, Sherbin, & Sumberg, 2009).

However, refuting the idea that there are motivational differences between Generation X and Generation Y is a study conducted by Patrick Montana and Janet Lenaghan published in a 1999 report. Montana's and Lenaghan's research was based off a 1960s and 1970s Leslie This and Gordon Lippitt study of 6,000 managers and 500 representatives of different companies and government agencies that were asked to rank six of 25 motivational factors that allowed them to do their best work (Montana & Lenaghan, 1999). They discovered that both Generation X (recent graduates) and Generation Y (current undergraduates) identified the exact same six motivational factors; steady employment, respect for me as a person, good pay, chance for promotion, opportunity for self development and improvement, and large amount of freedom on the job (Montana & Lenaghan, 1999).

They compared these results to the 1960s and 1970s results. The 1970s results provided a close match, however steady employment and chance for promotion were replaced with “opportunities to do interesting work” and “feeling my job was important” (Montana & Lenaghan, 1999, p. 28). Interestingly, the 1960's results overlapped with the 1970s and 1999 study with four of the six categories, “respect for me as a person”, “good pay”, “opportunity for self-development and improvement”, and “large amount of freedom on the job” (Montana & Lenaghan, 1999, p. 28). The results from Montana's and Lenaghan's

research indicate that Generation X and Generation Y value similar motivational factors and provide additional support that there are little differences between the two generations.

In 2007 Patrick Montana expanded on his previous research at Hofstra University. Along with Francis Petit, they discovered that Generation X and Generation Y did not share the exact same motivational factors (Montana & Petit, 2008). Their research showed that Generation Y ranked the following six factors as their principal motivators, “respect for me as a person”, “good pay”, “getting along well with others on the job”, “chance for promotion”, “opportunity to do interesting work”, and “opportunity for self-development and improvement” (Montana & Petit, 2008). “Although the rankings by Generation X and Y were markedly different from earlier generations, they were close to each other”, only varying in Generation X preferring “feeling my job is important” over “getting along well with others on the job” (Montana & Petit, 2008, p. 37).

The authors specifically point out that Generation Y ranked “getting along well with others on the job” as the leading motivator of this generation even though it wasn’t even chosen in the top six by Generation X (Montana & Petit, 2008). Additionally, Montana and Petit reference another study by This and Lippitt conducted in the 1970s (pre-boomers) and 1980s (boomers) where they report that both of these generations ranked six factors of motivation identical to each other (Montana & Petit, 2008).

2.3 Motivational Variations Between Careers

Much debate occurs with respect to whether various generations are motivated by different motivational factors or attributes. However, to completely understand the research surrounding what motivates millennials entering an IT career, an exploration of literature surrounding motivational preferences of IT employees is needed.

Susan O’Neal (1998) indicates that a total rewards strategy provides an interdisciplinary solution to the complicated problem of recruiting and retaining employees (O’Neal, 1998). A total rewards framework is the process by which everything an employee would receive from an employment relationship is identified and assigned to one of four categories. These four categories are laid out in a two by two quadrant. “The upper two quadrants – pay and benefits – represent transactional rewards” (O’Neal, 1998, p. 8). The lower two quadrants represent the relational rewards of learning and development and the work environment (O’Neal, 1998). O’Neal (1998) states, “These [“gold-collar”, Information Technology (IT) workers with “hot skills,”] workers are far more focused on technology and their work environment than on pay and benefits.” (p. 10)

Researcher Laura Bottorff corroborates on these findings. Bottorff (2011) states, “Transactional attributes were not found to be more important than relational attributes to surveyed student Millennials – in fact, just the opposite was supported.” (p. 27)

James Kochanski and Gerald Ledford in their 2001 article explored the top 15 predictors of retention for technology and scientific professionals. They identify these professionals as “knowledge workers whose work is governed primarily by their own knowledge and expertise rather than by a routine or system” (Kochanski & Ledford, 2001, p. 31). They conducted a study based on the employee value proposition co-sponsored by Nextra, Sibson Consulting Group and WorldatWork (formerly the American Compensation Association) on the attitudes of 210 full-

time high-tech employees in the private-sector workforce (Kochanski & Ledford, 2001). “Fully three-quarters of scientific and technical employees reported that work content was very important or extremely important in determining whether they remained with their current employer” (Kochanski & Ledford, 2001). Additionally, this motivation group was the most highly rated (Kochanski & Ledford, 2001). The other four types of rewards: direct financial, indirect financial, career rewards, and affiliation were rated at 62 to 65% as highly important in their decision (Kochanski & Ledford, 2001).

Researchers Reiner Leschinsky and Judd Michael modified the existing This and Lippitt survey methodology and rather than use a broad population of generational cohorts such as recent college graduates or undergraduates, they used generational cohorts within a specific industry, in this case blue-collar production employees in the wood products industry. “The results of the mean-score ratings show that the motivators good pay and having steady employment are ranked in the top three through all the age groups” (Leschinsky & Michael, 2004, p. 38). Leschinsky and Michael (2004) point out that when compared to the 1999 Montana and Lenaghan studies, “respect for me as a person by my supervisor as the most important motivator followed by good pay and opportunity to do interesting work” were the most important factors (p. 38).

Steven Rumpel and John Medcof conducted similar research but rather than use Employee Value Proposition (EVP) they explored high-tech companies that used a total rewards approach to motivating employees (Rumpel & Medcof, 2006). They indicated “technical workers have an unusual rewards preference profile” (Rumpel & Medcof, 2006, 29). They cited a study conducted by Towers Perrin in which 100% of non-technical respondents indicated pay elements as rewarding (Rumpel & Medcof, 2006). Additionally, Rumpel and Medcof cite three more studies about high-tech companies where pay was not the number one motivating factor, but work environment, learning and development were (Rumpel & Medcof, 2006).

Rumpel and Medcof (2006) state “First, clear evidence is available that [Research and Development] R&D workers value all four reward quadrants, not just the traditional monetary compensation and benefits packages that many firms offer” (p. 32). They continue, “Secondly, it is clear that rewards aligned under the work environment quadrant are the most highly valued by these workers” (Rumpel & Medcof, 2006, p. 32).

2.4 Historical Summary

There is conflicting research about whether motivational preferences can be accurately predicted by an individual’s generational cohort. Research is nearly split on whether an employee’s generational cohort is an accurate predictor of motivational preferences.

Research unveils more consistent results when looking at motivational differences among specific types of employees or lines of work. There appears to be a consensus in the theory that blue-collar workers are motivated by much different factors than what motivates high-tech, knowledge driven workers. Additionally, there is little disagreement that discovering what motivates individuals and rewarding them on what they find important is the key to successfully recruiting and retaining talent.

3. RESEARCH METHODOLOGY

3.1 Design

The goals of the research methodology were three-fold. The first objective was to understand specific motivational attribute importance. This was achieved by having participants rate various motivational factors on a Likert type scale. This section of the methodology was based off work originally created by Leslie This and Gordon Lippitt in the 1960s. Their original 25 motivational attributes was modified to remove outdated factors such as “having a local employee paper” and expanded to include more modern and IT specific workplace motivators such as “sabbatical leaves for passion or volunteer work”, “working for an eco-conscious and socially-aware organization”, “having a flat management hierarchy”, and the “option to telecommute”.

The second objective of the methodology was to understand the importance of each of the total rewards categories. This was achieved by asking participants to rank order four sets of motivators. Within each question set, a motivator representing each of the four total rewards categories of pay, benefits, learning and development, and work environment was included.

The last goal of the methodology was to understand what motivators participants considered important when forced to choose one over the other. This section of the methodology contained a list of four dichotomous questions. These questions also used the total rewards categories. The first two questions paired motivators representing the total rewards categories of pay versus benefits and the last two questions paired learning and development and work environment.

3.2 Pilot Study

The resultant pilot survey was quantitative in nature and was conducted by a web-based survey distributed to current IT students, IT student employees, and full-time IT employees throughout the state of Indiana. The sample population was limited to individuals of the millennial generation, those individuals born between 1980 and 2000, and to those participants that are currently employed as full-time IT employees or anticipate full-time IT employment in the near future.

In order to increase participation and successful completion of the survey, an incentive was offered to participants. Upon successful completion of the survey, participants could choose to have their contact information entered into a separate raffle drawing for one of two \$25 iTunes gift cards.

Approval of the research study was requested and received from the university’s Institutional Review Board (IRB). It was estimated that participants could complete the survey in less than 10 minutes.

3.3 Units

The survey presented a list of 40 workplace motivational attributes and each participant was asked to rate each of the attributes on a five point Likert scale from 5 (very important) to 1 (unimportant). Similar to the previous studies, the top six primary motivators were identified by statistical analysis. Additionally, ANOVA and Tukey HSD (Honestly Significant Difference) tests were utilized to determine significant differences between the means. The survey also asked a series of four rank order questions. Each rank order question contained a set of four motivators, one motivator from each of the four total reward

categories. These rank order questions forced identification of a single motivational factor and subsequent total rewards. Lastly, a set of four dichotomous type questions was asked. These questions were used to identify the most important motivator of the two presented.

3.4 Sample

While the population of the study was the millennial generation of individuals having full-time IT employment or aspirations of pursuing full-time IT employment, the sample population was students currently enrolled in IT courses or as IT employees at Purdue University and individuals employed as full-time IT employees throughout the state of Indiana. The survey methodology restricted participation to those individuals who are members of the millennial generation and who currently have full-time IT employment or anticipate pursuing full-time IT employment in the near future.

3.5 Data Collection

Data collection was performed via the university’s Qualtrics survey system. Individuals were provided the solicitation email that included a link to the survey. The survey tool provided two qualifying questions, year of birth and a yes or no question asking whether or not the individual was currently employed as full-time employee or of if they anticipated pursuing full-time IT employment in the future. Individuals that that did not fit the research demographics of birth year ranges outside the research range of 1980 to 2000 or who answered no to the IT career question were directed to the end of the survey and presented with a statement that thanked them for starting the survey, but that they did not qualify to participate in the study.

Qualtrics was set up so that each question block required participants to respond to every question. Additionally, the Qualtrics option to prevent ballot stuffing was enabled to restrict users from taking the survey multiple times. This option prevented those individuals that have already completed the survey from retaking it and also prevented individuals that did not pass the two initial qualifying questions to resubmit their answers.

3.6 Survey Instrument

The survey instrument was divided into 7 blocks or web pages. The first block provided the high-level overview of the study, outlined that it was completely voluntary, that individuals could stop at anytime, and individuals that successfully completed the study would be entitled to enter their email address into a raffle.

The second block provided the two qualifying required questions. Year of birth was the first question and it was collected as four digits. The second question was a yes or no radio button asking the users to indicate whether they were currently working as a full-time IT employee or if they saw themselves pursuing full-time IT employment in the future.

Upon successfully qualifying for the survey, users were provided block three. This block of questions collected the demographic data for research. Demographics collected included gender, graduation status, employment status, and internship status.

Block four and five each provided a list of 20 motivators and individuals were required to rate each one on a Likert type scale, very important to unimportant. Responses of very important were recorded a 5, important as a 4, moderately important as a 3, of little importance as a 2, and unimportant as a 1.

Block six provided participants with a set of four rank order type questions with each question containing a set of four motivators, one motivator from each of the four total rewards categories. The specific motivators and the grouping of what motivators were assigned to each question set was the output from a three step process. The first step was assigning all 40 of the motivators to a total rewards category. The second step was the identification of four motivators from each of the four total rewards categories. The final step was placing each motivator, representing the total rewards category, into the assigned question block. This was completed by grouping one motivator from each of the total rewards categories into a question block consisting of all four total rewards categories. The motivator assignment to a particular question block was determined by the order they appeared in the final list of 40 motivators. Additionally, this set of four questions staggered the presentation of motivators based on total rewards category.

Responses from this set of four questions were recorded in Qualtrics with a rank assigned to each individual motivator item. The highest ranked item was identified with a number one, the second highest with a two, the third highest with a three, and the least important motivator as a four. The score for each motivator item would be transformed within SAS to better match the previous Likert scale used in question block four and five.

Block seven of the survey provided users a set of four dichotomous questions. These questions were developed from the final list of 40 motivators and paired according to researcher interests and committee input. The first two questions in this block paired the total rewards categories of pay versus benefits. The last two questions paired the total rewards categories of learning and development with work environment. Responses for each pair of questions were recorded as a one or a two. A response of one represents the first item in the pairing and a two represents the second item.

Once participants successfully completed the final question block, they were directed to the end of survey message that thanked them for their participation and provided them with the option to be enter the drawing via a separate survey link. This survey link was also set up to prevent ballot stuffing and required participants to be referred to the survey link from the previous research survey.

3.7 Data Manipulation

Data was exported from Qualtrics into a file that contained comma-separated values. The Qualtrics export was cleansed to remove partially completed and non-qualifying responses. Additionally columns not needed for the research such as start and end times, year of birth, etc. were removed as well.

Data was imported into SAS 9.2 for analysis. Direct results from Qualtrics were used in all cases except for question block six, which contained the rank order questions. This set of four questions, each containing four rank order items, were exported from Qualtrics as 16 items. Item one represented the first motivator listed in question one, item two as motivator two, item three as motivator three, item four as motivator four, item five as motivator one in question set two, item six as motivator two in question set two, etc. Rankings of 1 to 4 were assigned to the individual motivators within each question set. 1 indicated the most important item, 2 the second most, 3 to the third most, and 4 to the least important motivator. In order to more closely align with Likert type scale used for the 40 motivators listed in question block four and five, where the very important response was

indicated as a 5, the responses for this question block were transformed in SAS so that the most important motivator was assigned a 4, the second most a 3, the third most a 2, and the least important motivator a 1.

4. RESULTS

4.1 Demographics

259 responses were received from an estimated 4,130 possible participants or a response rate of 6.27%. 121 of those participants met the eligibility requirements of birth years, intent to pursue or currently having IT careers, and completed the survey. 100 individuals submitted their email address in the additional survey to be entered into the drawing for two \$25 iTunes gift cards. 102 individuals were male and 19 were female. 109 of the participants were still students and 12 had graduated. 28 participants were unemployed, 69 were employed part-time, and 24 indicated they were employed full-time. 61 participants indicated they had an IT internship as a student and 60 indicated they had no internship.

4.2 Preliminary Findings

When examining the results of the pilot study conducted at Purdue University that was based off of historical research aimed at identifying the top motivators simply by mean response alone, the motivator “respect for me as a person” was rated as most important. However, statistical tests showed that there were no significant differences between the top seven motivators. The only motivator to make the top seven that wasn’t in the original study that researchers This and Lippitt conducted was “good health insurance coverage”. Surprisingly, unlike previous studies, the motivator of “good pay” didn’t make the list of top motivators.

However, it is interesting to note that when presented with the choice of either having “increased pay” or “longer vacation allowances”, participants choose increased pay. Additionally, when participants were required to select between “increased stock options” or “reduced health insurance costs”, participants chose “reduced health insurance costs”.

A total rewards methodology was applied to the rank order type questions and the 40 motivators. In the rank order type questions, where there was an equal number of motivators representing all the total rewards categories, the motivators representing the total rewards category of pay were highest ranked. Similarly, when reviewing the 40 motivators within their specific total rewards grouping, pay was statistically different than learning and development.

Additionally, when the rank order type questions and 40 motivators were categorized into their total rewards groupings of transactional or relational based rewards, participants showed a statistical preference for motivators that represented the total rewards group of transactional rewards over relational.

The methodology also aimed to determine whether or not demographic factors such as gender, employment status, and history of an IT internship was related to the importance ratings millennials assigned to workplace motivators.

When reviewing gender across all 40 motivators, male and female participants only had statistically significant different ratings for two of the 40 motivators. When looking at the four dichotomous questions, male and female participants only had one question that resulted in statistically significant differences, males preferred “pay” over “longer vacation allowances” and females preferred the opposite.

When reviewing the motivators within the total rewards framework, there was no statistical difference between male and female participants in the four sets of rank order type questions. When reviewing the 40 individual motivators assigned in a total rewards categories, male and female participants had statistically significant differences in the ratings they assigned to learning and development. Females preferred it more than men.

Lastly, when reviewing the total rewards groupings of transactional and relational based rewards, neither the rank order type question nor the 40 motivators assigned to their total rewards grouping resulted in any statistically significant differences between male and female participants.

The study also aimed at understanding if participants' employment status could be a factor in motivational preference. In five of the 40 motivators, the participants' employment status resulted in statistically significant differences in motivational ratings. Unemployed individuals rated "good pensions" as more important than those employed part-time. Participants employed full-time rated the motivators "large amounts of freedom on the job", "culture of high performing staff", and "access to social media at work", as more important than the other employment classes. Participants employed full-time also rated the workplace motivator of "company discounts and purchasing programs" less important than those employed part-time. Employment status had no statistical significant impact on the four dichotomous questions.

Lastly, the study aimed at trying to understand if internship was a factor in workplace motivational rating. In six of the 40 motivators, the participants' internship status resulted in statistically different motivator ratings. Individuals that did not have an internship rated "constant feedback" less important over those that did have an IT internship, but they rated "fair vacation arrangements", "large amounts of freedom", "flexible work and telecommuting", "relaxed dress policy" and "good health insurance coverage" as more important than participants that did have an internship. Finally, those individuals that had no internship preferred a "culture of high performing staff" over a "defined mentoring relationship", whereas those that did have an IT internship slightly preferred "defined mentoring relationships" over a "culture of high performing staff".

5. CONCLUSIONS

This research was aimed at developing a methodology to identify the top workplace motivators and attributes that the millennial generation prefers when having or seeking full time IT employment. It combined two broad categories of research, specifically generational studies of motivation and career path or job type motivational preferences. In order to enhance the study's reliability, the framework was composed of three methods to measure motivator preferences, starting with a Likert type scale, to a set of rank order type questions, and lastly by requiring participants to select one motivator over another.

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