**How Federal Agencies Can Attract College Graduates**

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**Abstract**

When asked about post-graduation plans, 27.3% of students declared intent to pursue working in

private industry, while 2% intended to work for the federal government.  Employees younger than 30

make up only 8.5% of the federal workforce, compared to 23.2% of the U.S. overall workforce ("College

Students," 2014).  Despite this disparity, 92% of the students I surveyed in age groups younger than 31

stated that they were willing to apply for federal positions if an agency scored well in categories

students deemed important.  In addition, students ranked work-life balance, pay, and performance-

based rewards as their top three most important categories, which scored fourth, seventh, and tenth,

respectively, by federal employees in 2019.

*Keywords:* federal versus private workforce, federal agencies, student evaluations of careers,

post-graduate plans

**How Federal Agencies Can Attract College Graduates**

It is estimated by *Government Executive* that around 14% of the federal workforce is eligible to retire as of 2018, and expected to increase to up to 30% by 2023 (Katz, 2018).  "Eligible to retire" refers to employees who are able to request retirement with full benefits, but it is important to note that this does not include employees who are eligible to retire early at a reduced pension—a choice that may be made less often—or by a federal Reduction in Force (RIF).  About 2.6% of the federal workforce voluntarily retired with full pensions in 2019, with an upward trend ("Retirement Statistics;" Jennings et al, 2020).

Regardless, due to the average age of federal employees continuing to rise, agencies face a dilemma: how can they attract younger talent to fill the void retirees will inevitably create?  Specifically for the scope of this study, white-collar, college-educated talent, since about 90% of the federal workforce is comprised of white-collar positions ("Federal Workforce," 2019).

**How Current Federal Employees Rate Their Agencies**

Each year since 2010, with 2019 being the most recent year available, the Office of Personnel Management (OPM) surveys federal employees from participating agencies with a tool called the Federal Employee Viewpoint Survey (FEVS).  From OPM's website, "The OPM FEVS serves as a tool for employees to share their perceptions in many critical areas including their work experiences, their agency, and leadership" ("Federal Employee Viewpoint Survey," n.d.).  BestPlacesToWork.org (BestPlaces) takes the data collected through the FEVS and scores ten aspects of each agency by averaging the percentage of "positive" responses to each question.  The BestPlaces rankings "…include 490 federal agencies and their subcomponents: 17 large agencies, 25 midsize agencies, 28 small agencies and 420 subcomponents" ("Methodology – best places," 2019).  The percentage of positive responses is found by dividing the number of positive answers to each question by the total number of responses to that question.

While OPM collects the raw data from employee responses, BestPlaces does all the analysis, including ranking agencies and categories.  Their website offers views for overall rankings by large, midsize, and small agencies, as well as their subcomponents, and rankings by each individual category.

**What College Students Look for in a Career**

The National Association of Colleges and Employers (NACE) surveyed 37,874 college students in 2014 on what they want most from their first job.  The results showed that out of 16 categories, the most important four (i.e. categories that survey participants answered were extremely or very important) are the opportunity for personal growth and development, job security, friendly co-workers, and good insurance and benefits packages ("College Students," 2014).

The same NACE survey also indicates that 5.7% of participants list a career in the federal service as their ideal career, and 2% say they planned to enter the federal service directly after graduation.

**Purpose of This Study**

According to Govexec.com, only 8.5% of the federal workforce is younger than 30, as opposed to 23.2% of the general US workforce ("College Students," 2014).  The four most important categories according to the NACE survey indicate that the things students want out of their first job are not exclusive to the private sector.  Why, then, is there a 14.7% difference in the age of either workforce?

Part of this dichotomy is due to the federal workforce employing less people than other sectors, such as the nonprofit and private sectors.  Still, the federal government employed around 2 million civilians as of 2020 (Hill, 2020).  This study was meant to compare how students rate different workplace categories, compared to how employees rate their own agencies in the same categories.  Finding how students rate each category in importance was done in a similar fashion to the NACE survey; I calculated only the *Very Important* responses to determine the most important workplace categories.  I then compared that to the already available OPM FEVS results to determine a few datapoints: 1. Which categories are most important to students; 2. Which agencies students are interested in with their

current knowledge of mission; 3. If what students list as important, compared to how agencies are rated

by employees, matches which agencies students are interested in; 4. What agencies can theoretically

focus on in policy and culture to retain and recruit students, based on what students find most

important.

**Method**

**Sample**

Non-identifiable demographics, category evaluations, and likelihood of joining each listed

federal agency were retrieved using a web based Qualtrics survey.  Participants found the survey either

through dissemination on social media, or by a mass email sent to Drake University College of Business

and Public Administration students; participants were not provided an incentive to complete the survey.

Demographic data was optionally provided by each participant, including college currently attended or

planned to attend, degree intended to graduate with (i.e. Certification, Associate's, Bachelor's, Master's,

Doctoral), academic major intended to graduate with, age group (17 or Under, 18-24, 25-31, 32-38,

39+), and whether the participant or a family member works for local, county, state, or federal

government.

This sample included participants from Drake University (58%), Iowa State University (5%),

Southern Illinois University (5%), Arkansas State University (2%), Illinois State University (2%), Maryland

University (2%), McKendree University (2%), Mercy College of Health Sciences (2%), Missouri University

(2%), Northern Arizona College (2%), Pittsburgh Theological Seminary (2%), Syracuse University (2%),

University of Northern Iowa (2%), University of Iowa (2%), Washington State University (2%),

Westminster College (2%), and 6 (10%) chose an ambiguous answer or did not respond.

Degrees intended to graduate with included 39 Master's (66%), 10 Bachelor's (17%), 3 Doctoral

(7%), 1 Certification (2%), and 6 (10%) did not respond.  Majors that the students intended to graduate

with included 18 Public Administration (31%), 17 Business (29%), 5 Computer Science/Data Analysis

(8%), 4 Medical/Pharmaceutical (7%), 3 Education (5%), 3 Law (5%), 2 Civil or Structural Engineering (3%), 2 Psychology (3%), 1 Foreign Languages (2%), 1 Divinity (2%), and 3 (5%) did not respond.

Data on how employees rated their agencies was already available through BestPlaces and the OMP FEVS.

**Instrument**

The survey consisted of 48 items to collect demographics and to rate the importance of several categories of workplace traits, followed by 13 more items to indicate the likelihood of working for the indicated federal agency(s).  While the data has no recorded psychometric properties, the items do have face validity.

To rate the importance of each category, participants rated each question as *Not Important*, *Slightly Important*, *Moderately Important*, or *Very Important*.  Each question belonged to a category, including Effective Leadership, Employee Skills/Mission Match, Pay, Strategic Management, Teamwork, Innovation, Training and Development, Work-Life Balance, Support for Diversity, and Performance-Based Rewards and Advancement.  The number of participants who answered each question as *Very Important* were divided by the number of total answers for that question to find a score.  Each score for each question in a category was then averaged to find the aggregate score for each category.

Following the importance ratings, participants were then asked if they were willing to apply for jobs in federal agencies that scored well with employees in categories they rated as important.  13 Likert-Scale questions asked participants to rate their likelihood of applying for each agency from *Extremely Unlikely* to *Extremely Likely*, and an option of *Need More Information* if they had no opinion due to lack of mission knowledge.

**Design**

This study used a survey method of capturing relevant data.  I created the survey using Drake University's free access to Qualtrics for students.  I asked Drake University faculty for assistance on

sending the survey out via a mass email, and asked contacts on social media to share with current and

future college students.

Aside from text-box entry for the demographics section, the "importance measuring" section of

the survey utilized a 0-3 Likert scale, and the section asking about applying for federal agencies used a

five-item Likert scale.  Dependent variables were answers for questions 7-47 (asking how important

each workplace trait is), and answers to questions 49-61 where applicable (likelihood of applying for a

given federal agency).  Independent variables were self-realized beliefs about how important certain

traits in the workplace are, and general attitude towards different federal agencies depending on

mission/agency knowledge.

The questions on this survey were similar to the ones asked on the FEVS survey.  While the

purpose of each is different—the FEVS creating an aggregate rating of positive experiences with

workplace traits, as opposed to this study's aggregate rating of important workplace traits—comparing

the aggregate ratings of both should, in theory, indicate which traits are important to students, which

traits are positive in each agency according to current employees, and which agencies students may be

inclined to join.

<div align="center">**Results**</div>

**Categories of Highest Importance**

Table 1 indicates the quartile rankings of each workplace category set rated by survey

participants.  Results of the highest categories of importance were calculated by dividing the number of

students that declared a question *Very Important* by the total number of responses to that question,

then averaging the ratings between all questions in a category, and finally multiplying the aggregate

rating by 100.  The results show that students primarily value work-life balance (M = 71.7), pay (M =

71.7), and performance-based rewards (M = 67.0) in their first jobs out of college.

**Top Quartile of Employee Ratings**

Table 2 shows quartile rankings for each workplace category set from the BestPlaces survey. BestPlaces uses OPM's data and calculates aggregate scores for each of the 10 workplace categories by dividing the number of employees who answered a question positively by the total number of employees who completed the survey.  OPM's own data calculates the rating slightly differently: the number of employees who answered positively is divided by the number of answers to that individual question, rather than responses to the entire survey.  This means the BestPlaces positive response rates, and the results in Table 2, may be lower than OPM's calculations.

As indicated in Table 2, the three categories that employees rated the most positively are skills-mission match (M = 77.5), teamwork (M = 68.3), and innovation (M = 64.4).

**Comparison of Student and Employee Ratings of Categories and Agencies**

Three of the most significant differences between what students rated as important and what employees rated as positive are performance-based awards (difference of seven ranks), pay (difference of five ranks), and work-life balance (difference of three ranks).

The three agencies with the greatest difference between how likely students are to join compared to how well employees rated them are the Department of Homeland Security (difference of nine ranks), Department of Defense (difference of seven ranks), and Department of Justice (difference of seven ranks).

**Agency to Major Relationship**

Table 4 shows how much interest each major showed in their top three agencies.

**Discussion**

With a drastically lower percentage of employees younger than 30 in the federal workforce when compared to the general U.S. workforce, federal agencies would be wise to identify ways to recruit and retain young talent to prepare for the retirement of older employees.  Perhaps a clue to generational differences in opinion of what employers should provide, this study suggests college

students are most interested in motivators like work-life balance, pay, and performance-based rewards. Additionally, according to CEO Rieva Lesonsky, work-life balance and flexibility are key to the happiness of employees of all generations (Rieva, 2019), and what federal employees rate positively: skills-mission match, teamwork, and innovation.

One challenge for federal agencies is the ever-looming possibility of a RIF, especially when new legislation reduces the budget of an agency. Typically, a RIF entails agencies first trying to incentivize early retirement for eligible employees, before resorting to more drastic measures like forced retirement ("Reduction in force," 2020). These, as well as legislation to downsize specific agencies, can force knowledge gaps without sufficient succession planning, and limit the number of new hires coming in, making any recruitment and retention initiatives moot.

**Why Students Want What They Want**

Students value work-life balance, pay, performance-based rewards, and, to a lesser degree, training and development and diversity in their first job out of college. Employees under the age of 30 do not want to work long unless compensated fairly, want to be paid what they believe they are worth, and want to be financially rewarded and recognized for going the extra mile.

Pay is important to students, and federal agencies do not, on average, compete with private salaries when compared 1:1. As of 2020, "Federal employees are paid on average 23.1 percent less than their private sector counterparts, according to calculations released by the Federal Salary Council" (Bur, 2020). Some of the non-direct-pay incentives that government agencies can choose to offer include benefits, flexibilities, pensions, and job security.

**What Agencies Do Well**

According to employees, agencies are strong in the areas of skills-mission match, teamwork, and innovation. Skills-mission match and teamwork may be positive due to the altruism that draws some people to government work, even when pay may not match what private industry makes. Additionally,

federal position descriptions—which every single federal job requires—are extensive documents that

list detailed descriptions of what that job will entail.  This means employees likely have a good idea of

what they can expect before even beginning the position.

Interestingly, despite ranking third on the FEVS, there seems to be two camps when it comes to

federal innovation: those who equate the federal workforce to antiquated systems and computers, and

those who work with state-of-the-art technology on land, sea, air, space, and cyberspace, that only the

government has access to.  In the federal government's 2019 fiscal year, 2.8% of all federal outlays went

towards federal research and development spending (Pethokoukis, 2020).

**What Agencies Need to Improve On**

While the federal government does a decent job at providing positive work-life balance, it could

certainly improve upon pay and performance-based rewards, which are the three most important

categories to current students; according to employees, work-life balance ranks fourth, pay ranks

seventh, and performance-based rewards rank tenth on the OPM FEVS.

Anecdotally, as a manpower analyst for the Department of Defense, I can understand how work-

life balance ranks in the second quartile of categories.  Most college-educated federal employees work

40-hour weeks, have access to alternate work schedules and telework, and are provided with ample

paid time off.

Pay for federal employees, on the other hand, does not compare well to pay for private industry

equivalents, with around a 20% difference (Bur, 2020).  Pay is difficult for the government to compete

with private industry on, since federal agencies' budgets are subject to change each year and each

administration, and the nature of the public competitive hiring processes that are meant to stop

nepotism and quick careerist-progression.  For example, even if someone straight out of college is

excelling in their first GS7 position, at best, they can only be promoted to GS9 after 52 weeks of work,

even if their supervisor would rather promote them to GS11 to retain them for their skill level.  Even

before being promoted, a federal supervisor must go through an extensive recruitment and position

advertisement process to offer an employee a promotion, which has a chance to be denied or be filled

by another employee.

In a similar vein, performance-based rewards may be difficult for federal supervisors to award,

and employees to earn.  There are limited resources within each agency's budget for financial or time-

off awards, so while discretionary cash awards do exist, they can be few and far between.

Federal leaders should analyze how other leadership of top-ranking agencies in each category

succeeds in providing positive experiences to their employees.  Emulating and studying the most

successful rating, training, pay/awards, flexible schedule, diversity, and other plans or initiatives could

be one way for agencies to improve their scores without reinventing the wheel, with the added benefit

of cooperating government wide.

**Limitations of the Research**

Perhaps the most obvious limitation of this research is the small sample size (N = 59).  This

hinders the accuracy of all responses, but especially makes it challenging to find meaningful data from

Table 4.  The even smaller sample size for some majors and fields such as music (N = 1) make it

practically impossible to glean any meaningful conclusion on which agencies some majors have the most

interest in.

Since most of my research and the OPM FEVS data consisted of participants responding to

Likert-Scale questions, central tendency bias may have been a factor in the results.  This bias "is a

tendency for a rater to place most items in the middle of a rating scale," which may result in the results

showing less significant results, as my survey focuses on answers of *Very Important* and the OPM FEVS

focuses on positive—and not neutral—answers (Glen, 2017).

Another limitation of this research is the possibility that participants have little to no knowledge

of agency mission or workflow, specifically during the section when asked how likely a student is to join

a given federal agency.  A law student, for example, may not know that the federal government employs

more than 25,000 lawyers, or know that agencies like the Environmental Protection Agency and Internal

Revenue Service employ more than 1,000 lawyers each (Andrzejewski, 2016).  Without knowledge of

what each large agency and their many complex subcomponents do, students may not know enough

about an agency to be compelled to seek jobs there.  This could also be viewed as a marketing failure on

the part of an agency—for example, despite their incredibly high OPM FEVS scores, a position with the

National Aeronautics and Space Administration may only be coveted by engineers and scientists, despite

the highly-praised agency employing thousands of non-STEM civil servants.

**Conclusion**

With the low and declining number of young college-educated students joining the federal

workforce, agencies need analyze what workplace traits employees have positive experiences with,

what students *want* positive experiences with, and emulate successful agencies' marketing, recruitment,

and retention strategies while staying competitive with other workforce sectors ("College Students,"

2014).

In their first jobs out of school, students place extreme importance on work-life balance, pay,

and performance-based rewards.  Students want decent hours and flexible schedules, salaries that

match what they—and private industry—believe they are worth, and want to be rewarded in

meaningful ways for meaningful extra effort.  While the federal government does a good job at

providing positive work-life balance, they struggle at providing positive experiences for both pay and

performance-based rewards.  If federal agencies do not provide positive experiences for what students

deem important in their future careers, some federal agencies could suffer from a scattered,

unmotivated, and inefficient workforce.

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**Table 1**

*Rankings of workplace categories in order of importance to students*

| Category | Aggregate Score |
|---|---|
| Work-Life Balance | 71.7 |
| Pay | 71.7 |
| Performance-Based Rewards | 67.0 |
| Training and Development | 62.3 |
| Diversity | 61.2 |
| Teamwork | 59.8 |
| Effective Leadership | 59.6 |
| Skills-Mission Match | 59.5 |
| Strategic Management | 58.7 |
| Innovation | 50.7 |

= Q4
= Q3
= Q2
= Q1

**Table 2**

*Rankings of workplace categories in order of positive experience score to employees (BestPlaces and*

*OPM FEVS data)*

| Category | Aggregate Score |
|---|---|
| Skills-Mission Match | 77.5 |
| Teamwork | 68.3 |
| Innovation | 64.4 |
| Work-Life Balance | 61.9 |
| Training and Development | 61.8 |
| Diversity | 59.9 |
| Pay | 59.5 |
| Strategic Management | 58.0 |
| Effective Leadership | 56.7 |
| Performance-Based Rewards | 47.9 |

= Q4
= Q3
= Q2
= Q1

**Table 3**

*Percent of total students indicating Extremely Likely to join each federal agency*

| Agency | % Likely to Join |
|---|---|
| Health and Human Services | 47.62 |
| DoD | 43.18 |
| DoJ | 40.82 |
| Homeland Security | 38.30 |
| Off of Sec Def | 37.50 |
| Intelligence Community | 34.88 |
| NASA | 31.71 |
| VA | 31.71 |
| USDA | 31.71 |
| Commerce | 27.27 |
| Transportation | 23.81 |
| Treasury | 21.74 |
| Dept of State | 21.74 |

= Q4
= Q3
= Q2
= Q1

**Table 4**

*Percentage of students indicating Extremely Likely to join their top-three agencies, by indicated major or*

*field*

| Major/Field | Agency | % with Interest |
|---|---|---|
| Public Administration | Health and Human Services | 57% |
| | DoJ | 50% |
| | Transportation | 44% |
| Business | Health and Human Services | 46% |
| | DoD | 43% |
| | Office of Sec Def | 39% |
| | Intelligence Community | 39% |
| | NASA | 39% |
| Computer Science, Data Analysis | Intelligence Community | 75% |
| | DoD | 67% |
| | Homeland Security | 50% |
| | Office of Sec Def | 50% |
| | NASA | 50% |
| Medical/Pharmaceutical | Health and Human Services | 50% |
| | DoD | 33% |
| | VA | 33% |
| Education | Health and Human Services | 100% |
| | DoD | 100% |
| | Office of Sec Def | 100% |
| Law | DoJ | 67% |
| | VA | 67% |
| | USDA | 67% |
| Civil or Structural Engineering | Health and Human Services | 100% |
| | DoD | 100% |
| | Office of Sec Def | 100% |
| | VA | 100% |
| | Commerce | 100% |
| | Transportation | 100% |
| | USDA | 100% |
| Psychology | N/A | 0% |
| Foreign Languages | N/A | 0% |
| Divinity | DoD | 100% |
| | Office of Sec Def | 100% |