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## **AC 2012-3355: MOTIVATIONS OF VOLUNTEER DREAM MENTORS**

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## Motivations of Volunteer DREAM Mentors

### Abstract

Two existing inventories are modified to measure motivations of DREAM mentors who volunteer as design project leaders for underrepresented, underserved high school mentees. The DREAM mentors are predominately undergraduate engineering students. Clary and Snyder's Volunteer Functions Inventory (VFI), and Esmond and Dunlop's Volunteer Motivation Inventory (VMI) are both used to determine the motivations of the mentors for volunteering. Results show that mentors are primarily motivated by the Values function, a measure of desire to help others for humanitarian reasons, independent of race, gender and experience. Returning mentors also place high value on the Understanding function, whereas new mentors are less motivated by this measure. All place some reasonably high level of importance on Reciprocity, Reactivity, and/or Recognition as measured by the VMI, suggesting the dominant motivations are purely altruistic while secondary motivations are for personal fulfillment or gain.

### Introduction

Long-term mentoring to increase the number of underrepresented minority students and women in the STEM pipeline, particularly engineering, is accomplished through the DREAM-Achievement through Mentorship program. In DREAM, engineering undergraduates volunteer as mentors for underrepresented high school students (mentees) from socioeconomically disadvantaged backgrounds. Mentors and mentees carry out design projects in groups using commonly available materials to solve a task or series of tasks, such as optimizing a wind turbine blade or constructing the strongest cantilever. Findings are very promising - mentees show significant increased interest in engineering. Furthermore, aptitude is enhanced through participation in DREAM, helping mentees gain admission to high quality degree programs, and then succeed in their studies.

After 4 years of investigating the outcomes for mentees, this work focuses on mentors. Interest in volunteer motivations stems from the psychology literature, as a body of work in this field has shown that organizations have much to benefit from exploring their volunteer's motivations. DREAM mentors volunteer their time freely every week. They do not receive pay or academic credit. Each mentor typically volunteers 1.5-2.5 hours per week, in one visit to one school. This includes travel time to and from the schools, which ranges from 30 minutes to 50 minutes, round-trip. On any given day, between 4-8 mentors visit a single school. The motivations of the mentors are explored in this work. Of interest is both why mentors first join the program, and why they stay involved, often for years. Although understanding student-volunteers' motivations for volunteering may be a complex task, such an understanding can aid the DREAM organization in better attracting and retaining student volunteers.

Three instruments were used to survey the DREAM mentors. The first is an internally developed Mentors Self-Assessment Survey (MSAS), which was first used in 2009. The MSAS contains both the Likert scale and open-ended responses to help better understand subtleties and identify outliers.

The second, Clary and Snyder's Volunteer Functions Inventory (VFI), was adapted for use with DREAM Mentors. The 7-point Likert scale, 30 item VFI assesses six functions potentially served by volunteering: *Career, Social, Values, Understanding, Enhancement* and *Protective*. Previous research has shown that the individual scales of the VFI possess a high degree of

internal consistency (*i.e.*, the items of each scale relate to one another) and are stable (responses to the scales are consistent over time) (Clary and Snyder, 1999: 157). The internal consistency is verified here for use with DREAM Mentors. The VFI is informative about the motivations themselves and their importance to respondents (Clary and Snyder, 1999: 157). In addition, the VFI includes a 12 item Outcomes measure and a 5 item *Satisfaction* measure. Returning mentors were surveyed in these areas to better compare their outcomes to the motivations of new mentors.

Finally, an adapted version of Esmond and Dunlop's Volunteer Motivation Inventory (VMI) was used. This is a 44 item assessment of which 18 items were identified as being moderately to completely unique from those on the VFI. The other 26 items were mapped to one or more items on the VFI and these questions were not repeated. To score the VMI the corresponding responses from the 7-point scale of the VFI were shifted to the 5-point VMI scale via the mapping. The VMI breaks motivations in ten categories.

## Literature Review

A volunteer has been defined to be "someone who contributes services without financial gain to a functional subcommunity or cause" (Henderson 1985, 31). College student volunteerism became a visible phenomena in the 1960s and 1970s. This was due in part to the creation of campus-based programs and their encouragement of student volunteerism (Ellis 1978).

As higher education institutions have come to understand the social and academic benefits of student involvement and volunteerism (Astin 1985), efforts have since been undertaken to increase such activity. As the levels of volunteerism increase across campuses, it is therefore important for educational institutions and campus-based programs to understand the mechanisms motivating and enabling students to volunteer. By developing such an understanding, DREAM understands that it can be in a better position to recruit, place, and retain its student volunteers (Clary, Snyder & Ridge, 1992; Cnaan & Goldberg-Glen, 1991; Esmond, 2001a; McCurley & Lynch, 1994, Vineyard, 2001).

Only in the past forty years have researchers explored volunteerism and motivation (Esmond and Dunlop 2004). Early studies sought to explain the motivations of older volunteers (Pitterman 1973), as well as possible gender-related motivations (Howarth 1976). Initial findings suggested volunteerism was not a strictly altruistic task. From anxiety-relief (Howarth 1976) to personal, social, and indirect economic rewards (Gidron 1987), volunteerism appears to provide benefits to the volunteer.

Expanding on this latter finding, researchers found volunteer motivations and rewards to be time dependent. While older volunteers place a higher value on social relationships, younger volunteers place a higher value on work experience (Gidron 1987 in Esmond and Dunlop 2004). As DREAM draws its volunteers from a university setting, findings concerning time dependency indicate DREAM mentors would likely be motivated by gaining professional experience.

In the eighties, research in this field became better established and models were developed. In particular, the two or three factor model gained popularity among scholars. Developed by Horton-Smith (1981), the two-factor model differentiated between altruistic motives (*i.e.*, intangible rewards such as feeling good about helping others) and egoistic motives (*i.e.*, tangible rewards). However, the two-factor model was soon questioned, when findings (Fitch 1987) indicated the possibility of a third motivational category.

### *Development of the Volunteer Function Inventory (VFI)*

In a study dedicated to understanding the motivations of college-student volunteers, Fitch

(1987) developed a 20-item scale that involved a three rather than two factor model. In addition to the altruistic and egoistic motivational constructs, Fitch (1987) developed a social-obligation construct (Esmond and Dunlop 2004). As subsequent work continued to find evidence for additional motivational constructs (e.g. material motivations in Morrow-Howell and Mui 1989), it became clear that developing a volunteer-motivation model would be a complex task.

Building on existing work, the early nineties brought about more empirically rigorous research in the study of volunteer-motivation understanding. By first surveying the work on volunteer motivations, Cnaan and Goldberg-Glen (1991) categorized the motivations that were found to exist. From existing work, Cnaan and Goldberg-Glen (1991) developed the Motivation to Volunteer (MTV) scale. Through a study undergone on 258 volunteers and a control group of 104 non-volunteers, Cnaan and Goldberg-Glen (1991) concluded that volunteers do not act on one motive or a single category of motives. Rather, evidence favored a unidimensional model, or a combination of motives.

While convincing, the unidimensional model was soon challenged. Clary and Snyder (1999) found evidence for a multi-motivational nature of volunteering. This meant different volunteers pursue different goals, and even the same volunteer may pursue more than one goal (Clary and Snyder, 1999: 157). Continuing work on this study led to the identification of six primary functions: *Values*, *Understanding*, *Career*, *Social*, *Enhancement*, and *Protective*. A group of five statements, each measured by a 5-point Likert scale, are uniquely linked to one of the six functions described below. This tool is the Volunteer Functions Inventory (VFI).

The first of the six functions is *Values*. This refers to a volunteer seeking to act in accordance to deeply held beliefs about the importance of helping others. The second function is *Understanding*, or the involvement in activities that satisfy a desire to learn. The third is *Career*, or seeking ways to explore job opportunities or advancement in a work environment. The fourth function, *Social*, refers to volunteers seeking to conform to the normative influence of significant others. The fifth function is that of *Enhancement*, which is indicative of a volunteer trying to enhance their personal sense of esteem. Lastly, the *Protective* function refers to a volunteer seeking to escape from negative qualities or feelings.

#### *Development of the Volunteer Motivation Inventory (VMI)*

A final landmark study in this research area originates from the work of McEwin and Jacobsen-D'Arcy (2002). These researchers developed an initial Volunteer Motivation Inventory (VMI), which identifies eight motivational factors. These motivational factors are associated with 5 unique statements, adding to a total of 40 statements. However, after undergoing one the largest studies of volunteer motivations conducted worldwide, Esmond and Dunlop (2004) produced a final VMI that consisted of 44 short statements, to which volunteers respond using a 5-point Likert scale.

Unlike the previous VMI, the final VMI identifies ten key motivational categories. The first category is *Values*. This refers to volunteers engaging in voluntary work in order to express or act on firmly held beliefs of the importance of helping others (Clary, Snyder & Ridge, 1992). The second category is *Reciprocity*. This refers to volunteers taking part in such activities due to a belief that 'what goes around comes around' Esmond and Dunlop (2004).

The third category is that of *Recognition*, which refers to motivation stemming from an individual's recognition for their own skills and contribution. The fourth is that of *Understanding*, which refers to an individual volunteer's desire to learn more about the world through their volunteering experience or exercise skills that are often unused (Clary, Snyder & Ridge, 1992). The fifth category is that of *Self-esteem*, which refers to a motivation stemming

from an individual volunteer's desire to increase their own feelings of self-worth and self-esteem.

The sixth category is that of *Reactivity*, which allows for individual volunteers to 'heal' and address their own past or current issues. The seventh category is *Social*. An example of this is an individual seeking to conform to normative influences of significant others (Clary, Snyder & Ridge, 1992). The eighth category is *Protective*. Under this category, an individual volunteer wants to reduce negative feelings about themselves (Clary, Snyder & Ridge, 1992). The ninth category is *Social Interaction*. This refers to individual volunteers motivated by the possibility of building social networks and spending time interacting with others. Finally, the *Career Development* category refers to volunteers motivated by the opportunity to make connections with people and gain experience and skills in the field that may eventually be beneficial in assisting them to find employment. As the DREAM program draws its volunteers from a university setting, all categories are possible motivators for the subjects in this study.

The Esmond and Dunlop (2004) study found the following to be the most relevant motivational categories, in descending order: *Values*, *Reciprocity*, and *Recognition*. They also found that *Career Development*, *Social* and *Protective* factors were generally regarded as being less important. As DREAM volunteers are not drawn from a random sample of the volunteering population, it was expected that the order of motivational categories might vary from this previous study. However, it is shown that DREAM mentors' motivations largely aligned the ordering observed by Esmond and Dunlop.

## Methods

Three instruments were used to survey 40 DREAM mentors, 22 new and 18 experienced, within the first week of fall 2011 program. The experienced mentors had an average of 2.28 and a median of 2 semesters of previous mentoring experience, and covered a range of 1 to 5 semesters of experience. Of the 40 mentors surveyed, 22 self-identified as being from groups underrepresented in science and engineering (19 Hispanic, 2 African American and 1 Native American). The respondents were split roughly evenly by gender, with 23 men (57.5%) and 17 women (42.5%). The instruments used included an internally developed Mentors Self-Assessment Survey (MSAS), Clary and Snyder's Volunteer Functions Inventory (VFI), and Esmond and Dunlop's Volunteer Motivation Inventory (VMI). The MSAS was first used in 2009 and contains both Likert scale and open-ended responses to help better understand subtleties and identify outliers. The focus of this work is on the results from the existing inventories, the VFI and VMI, and supporting evidence for the value of volunteerism is given in the Conclusions from the MSAS.

Clary and Snyder's Volunteer Functions Inventory (VFI) was adapted for use with DREAM Mentors. The 7-point Likert scale, 30 item Reasons for Volunteering VFI assesses each of six functions potentially served by volunteering: *Career*, *Social*, *Values*, *Understanding*, *Enhancement* and *Protective*. Previous research has shown that the individual scales of the VFI possess a high degree of internal consistency (i.e., the items of each scale relate to one another) and are stable (responses to the scales are consistent over time) (Clary and Snyder, 1999: 157). The VFI is informative about the motivations themselves and their importance to respondents (Clary and Snyder, 1999: 157). In addition, the VFI includes a 12 item Volunteering Outcomes measure and a 5 item Satisfaction measure. Returning mentors were surveyed in these areas to better compare their outcomes to the motivations of new mentors.

Esmond and Dunlop’s Volunteer Motivation Inventory (VMI) was also adapted and used. This is a 44 item assessment of which 18 items were identified as being moderately to completely unique from those on the VFI. The VMI has ten categories, the same six defined by the VFI (*Values, Understanding, Self-esteem, Social, Protective, Career Development*) plus an additional four categories (*Reciprocity, Recognition, Reactivity, and Social Interaction*). Note that the *Self-esteem* function of the VMI is equivalent to the *Enhancement* function of the VFI. The 26 items that were not uniquely different from the VFI were mapped from one or more VFI items and were not repeated. To score and interpret the VMI, the corresponding responses from the 7-point scale of the VFI were normalized to real numbers (not necessarily integers) that were bounded by the 5-point VMI scale, and mapped to the VMI.

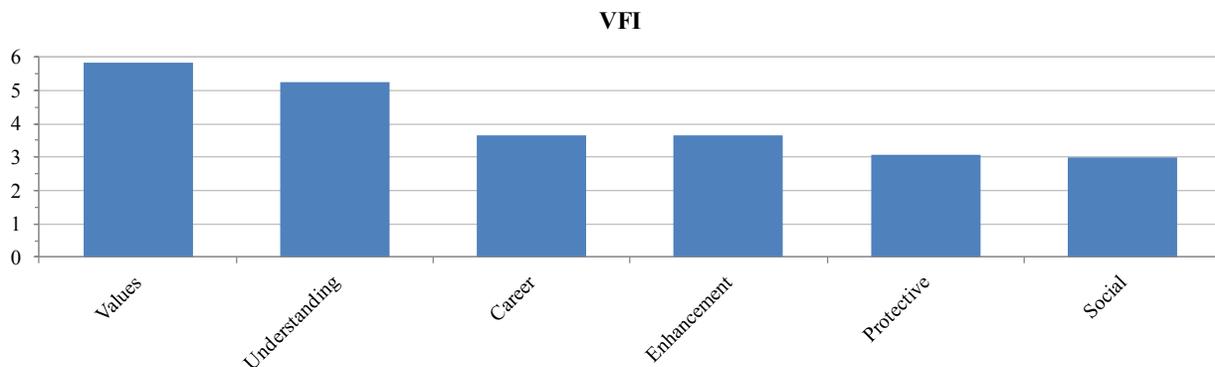
To study the mentor motivation the results of the inventories were analyzed in three ways. First, just the VFI items were scored and interpreted in the section *VFI Only*. Second, the 18 unique VMI items were combined with the appropriate set of one-to-one mapped VFI items for the 26 non-unique questions. This method provides a score that is equivalent to that for the complete VMI, and is called *VMI with VFI Mapped One-to-One*. Third, the 18 unique VMI items and all of the VFI items (some of which map to more than one VMI category) were combined to generate an average score for each of the ten different motivation categories in the VMI. This is referred to as the *VMI with Multi-Valued VFI Mapping*.

## Results

Results are grouped by the three methods of analysis, 1) *VFI Only*, 2) *VMI with VFI Mapped One-to-One* and 3) *VMI with Multi-Valued VFI Mapping*.

### VFI Only

When measured by the VFI alone, mentors motivations were always highest in the *Values* function and second highest in the *Understanding* function, independent to how the group was divided. For all mentors, out of a possible score of 35, the *Values* function was 29.1 (5.82 average per item) while the *Understanding* function score was 26.2 (5.24 average per item). The next two category scores were significantly lower, coming in at 18.3 (3.66 average per item) and 18.2 (3.64 average per item) for *Career* and *Enhancement* functions, respectively. The lowest motivations were 15.25 for *Protective* and 14.88 for *Social* motivations (3.05 and 2.98 average per item). These relative averages are shown in Figure 1.



**Figure 1.** Ranking of mentor motivation from the VFI alone.

To test the statistical significance of these findings, one-sample t-test was carried out, assuming uniformly spaced interval data in the Likert scale. The results indicate that the *Values* function is statistically significant when compared to each other function, with a maximum p-value of 0.0005. Similarly, the *Understanding* function is statistically significant when compared to each other function, with a maximum p-value of 0.0009. In contrast, the *Career*, *Enhancement*, *Protective* and *Social* functions are not statistically significant as compared to at least one of the other of these four functions. Thus, it can be said that DREAM mentors are first motivated by *Values*, then *Understanding*, followed by all other motivation functions.

#### *Measure of Internal Consistency*

As a means of insuring reliability of the VFI for DREAM mentors, the internal consistency of the items was investigated. In the VFI each function value is determined by 5 items scattered throughout the inventory. Responses for each of the 40 mentors were considered by individual, and then aggregated to give an overall measure of reliability for each VFI function. Cronbach's alpha  $\alpha$  was evaluated for each function as shown in Table 1. The results indicated that nearly all of the functions are determined by items with acceptable or good internal consistency. The exception is the *Understanding* function with  $\alpha = 0.636$  which is lower than desired. This function is also the most sensitive to the removal of one item, which can reduce the value to as low as 0.469 or raise it to as high as 0.756. In future implementations the outlier question: VFI-17: "*Others with whom I am close place a high value on community service*" will be removed or modified to improve the internal consistency.

**Table 1.** Reliability (internal consistency) of the VFI items for measuring motivations of DREAM mentors.

<b>Function</b>	<b>Cronbach's <math>\alpha</math></b>	<b>Range (min-max) of <math>\alpha</math> with one item removed</b>
Values	0.815	0.761-0.800
Understanding	0.636	0.469-0.756
Career	0.832	0.766-0.823
Enhancement	0.770	0.692-0.769
Protective	0.736	0.638-0.729
Social	0.825	0.754-0.806

#### *Small Subset Groupings*

Any subset of the sample size is too small to guarantee statistically significant results. However, several subsets were investigated to look for indicators of trend breaking. This will be studied when large samples are available. In the interim, they serve as hints of how to recruit DREAM mentors with the motivations desired and how to avoid recruiting mentors focused on goals such as padding their resume through inconsistent, or one semester participation in DREAM.

In comparing new and returning mentors, it was found that returning mentors placed somewhat more value on the *Values*, *Understanding* and *Enhancement* functions and somewhat less value on the *Protective* function. The largest disparity however was in the *Social* function, for which returning mentors had an average score of 16.6 while new mentors scored 13.45. Experienced mentors clearly value the social interaction that DREAM affords, but this remains only their 5th highest ranked function. *Career* function scores were unchanged between new and experienced mentors.

Race and ethnicity was considered for the three largest groups, Hispanic, Asian-American and Caucasian (55%, 22.5% and 17.5%, respectively). Two mentors identified as both Hispanic and Caucasian (mixed race), and these were recorded as Hispanic for the purpose of this study. Across these three groups there were no significant differences in motivations based on the VFI.

Motivations of male and female mentors were also compared. The overall trend was again unchanged. Interestingly though, males ranked their motivations higher in all 6 functions. The most significant changes were in *Enhancement* (19.7 for males, 16.2 for females) and *Social* (16.2 for males, 13.1 for females) functions. In the other four functions the differences are 2.2 or less between motivations of males and females. The disparity in the *Social* function is perhaps the most surprising, as many studies suggest that women can be retained in engineering through the use of group design projects, particularly in freshman year. The theory that women prefer working in teams more than men because of the *Social* aspect is not supported by the current work, though it is not necessarily refuted either.

The VFI also contains a 12 item Volunteering Outcomes measure and a 5 item Satisfaction measure. Experienced, returning mentors report their two most significant outcomes also in the *Values Outcomes* (6.11 average) and *Understanding Outcomes* (5.55 average) categories, consistent with their motivations. *Social Outcomes* (4.78 average) rank third for returning mentors, followed by *Enhancement Outcomes* (4.19 average). Not surprisingly, returning mentors generally report a high degree of *Satisfaction* (30.6/35 or a 6.12 average per item).

#### VMI with VFI Mapped One-to-One

As with the VFI, in VMI scoring the *Value* function is perceived as the most important motivation for mentors with an average score of 4.057 on the mapped 5 point Likert scale. However, three of the four categories of the VMI which are not measured in the VFI account for the next three most important motivations. Ranking the next three function averages, the order of importance is: 2) *Reciprocity* (average score of 3.700), 3) *Recognition* (average score of 3.465), and 4) *Reactivity* (average score of 3.243). Fifth most important is *Understanding* (average score of 3.237), which was second most important in the VFI.

**VMI One-to-One Mapping**

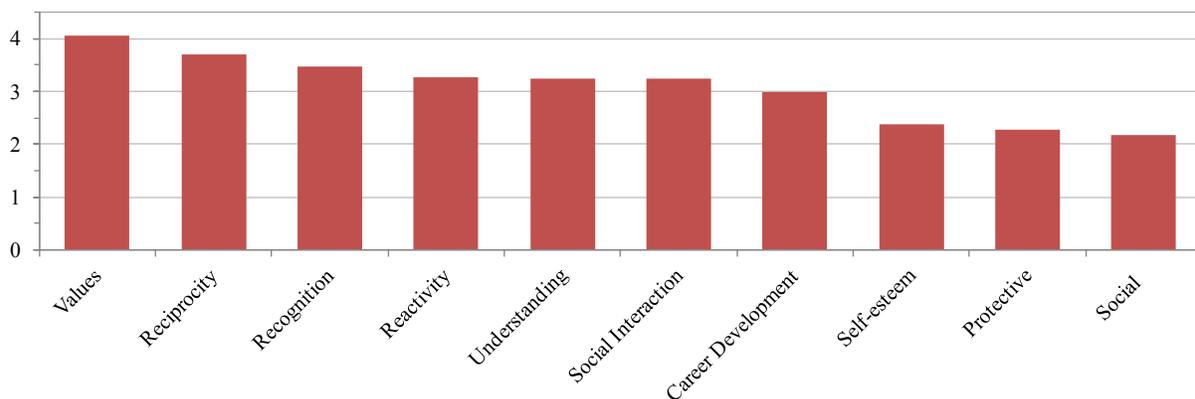


Figure 2. Ranking of mentor motivation from the VMI (with VFI items mapped one-to-one to VMI items).

The final function averages for the VMI are 6) *Social Interaction* (average score of 3.231), 7) *Career Development* (average score of 2.994), 8) *Self-esteem* (equivalent to *Enhancement*, average score of 2.360), 9) *Protective* (average score of 2.276), and 10) *Social* (average score of 2.160). These rankings are depicted graphically in Figure 2.

The general trend of motivations is similar to the result from the VFI. If the extra functions introduced by the VMI (*Reciprocity, Recognition, Reactivity, and Social Interaction*) are removed, the functions rank in the same order of importance as measured by the VFI: *Values, Understanding, Career Development, Self-esteem (Enhancement), Protective, and Social* as expected, since these are primarily measured via mappings from the VFI. The extra functions *Reciprocity, Reactivity, and Recognition* of the VMI all rank higher than *Understanding*. *Reciprocity* refers to the mentor’s motivation to volunteer with the notion that “doing good” for others will eventually lead to good things being done for them in return. *Reactivity* refers to the mentor’s need to volunteer to “heal” a current or past personal issue. *Recognition* is the motivation for a volunteer to have their skills recognized by other people. These three extra motivations suggest personal motivations to volunteering, though *Values* still dominate and *Understanding* motivations are still prevalent.

These VMI results were then analyzed based on gender and experience level (returning versus new) of the mentors. Both genders still rank the *Value* function highest, with a score of 4.11 for males and 3.98 for females. In general, the trends divided by gender roughly align with the general trend for both genders combined. A closer look at the individual gender rankings shows some slight differences as shown in Table 2.

**Table 2.** Comparison of gender’s ranking of the volunteer functions based off of the VMI categories.

<b>Ranking</b>	<b>Male Mentor Motivation (Average Score)</b>	<b>Female Mentor Motivation (Average Score)</b>
1	Values (4.112)	Values (3.982)
2	Reciprocity (3.696)	Reciprocity (3.706)
3	Recognition (3.565)	Recognition (3.329)
4	Understanding (3.430)	Reactivity (3.191)
5	Social Interactions (3.315)	Social Interactions (3.118)
6	Reactivity (3.283)	Career Development (3.059)
7	Career Development (2.946)	Understanding (2.971)
8	Self-esteem (2.597)	Protective (2.080)
9	Protective (2.410)	Self-esteem (2.039)
10	Social (2.345)	Social (1.909)

The largest change that can be noted between the genders is the emphasis that the two groups place on the *Understanding* function and the *Reactivity* function. These two motivation functions experience a shift of 3 and 2 ranks, respectively, whereas the other differences in the rankings are at most one rank difference. Measured by the VMI, male mentors place *Understanding* at a rank of 4 where female mentors were more likely to place it at a rank of 7. It should be noted that the difference in score between ranks 4 and 7 is quite small for females and may not be statistically significant.

Comparing the motivation between the returning mentors and new mentors with the VMI results shows both similarities and differences in motivations of new and returning mentors. Again, averaging the scores and comparing, the *Value* function is the primary motivation for both groups, this time with an average of 4.51 for returning mentors and 3.685 for new mentors. Showing the overall rankings for the two groups in Table 3 portrays the differences in new mentor emphasis versus returning mentor emphasis.

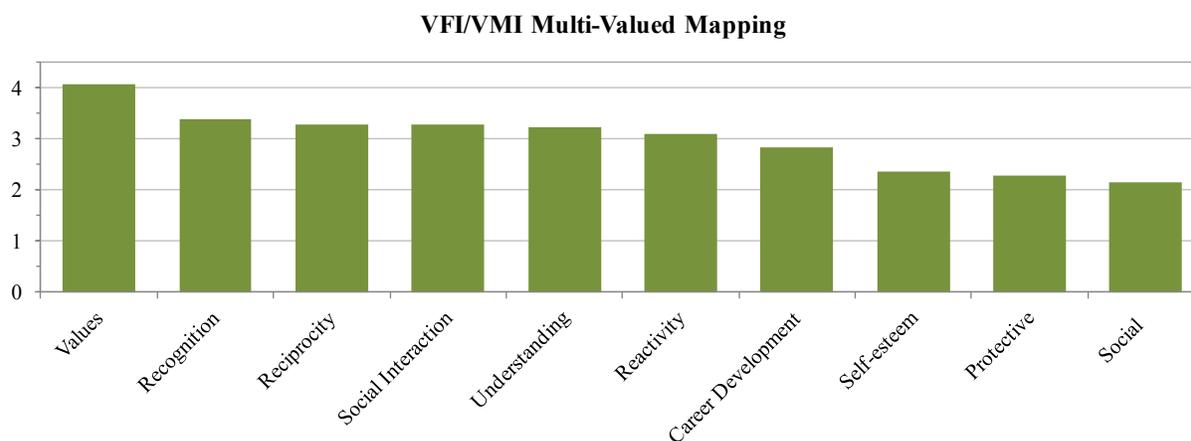
**Table 3.** Comparison of mentor motivations for returning and new mentors for the VMI.

Ranking	Returning Mentor Motivation (Average Score)	New Mentor Motivation (Average Score)
1	Values (4.511)	Values (3.685)
2	Understanding (4.030)	Reciprocity (3.636)
3	Reciprocity (3.778)	Recognition (3.573)
4	Recognition (3.333)	Reactivity (3.329)
5	Social Interactions (3.282)	Social Interactions (3.189)
6	Reactivity (3.139)	Career Development (3.079)
7	Self-esteem (2.926)	Understanding (2.588)
8	Career Development (2.889)	Protective (2.141)
9	Social (2.763)	Self-esteem (1.897)
10	Protective (2.440)	Social (1.667)

From Table 3 it is first clear that new mentors do not have a dominant primary motivation (average scores of their first three motivations are all very similar) as compared to returning mentors, who have a dominate focus on *Values*. Also, the most variation between rankings of any two groups occurs when returning mentors are compared to new mentors. This variation is most noticeable in the ranking of the *Understanding* function. The difference in rank is 5 positions, with returning mentors putting a much stronger emphasis on the *Understanding* function ranking it 2<sup>nd</sup>, compared to new mentors who ranked it 7<sup>th</sup>.

#### VMI with Multi-Valued VFI Mapping

For the second method of analyzing the VMI, the scores of the VMI questions were averaged with all the VFI question scores, whether they mapped to VMI questions or not. Generating average scores for all of the mentors as a whole group produces a broader scope for general trends. For this method, the function of *Value* is still the leading motivator for the volunteer mentors. The rest of the ranking proceeds as: 2 – *Recognition* (average score of 3.393), 3 – *Reciprocity* (average score of 3.293), 4 – *Social Interactions* (average score of 3.270), 5 – *Understanding* (average score of 3.237), 6 – *Reactivity* (average score of 3.091), 7 – *Career Development* (average score of 2.842), 8 – *Self-esteem* (average score of 2.360), 9 – *Protective* (average score of 2.276), 10 – *Social* (average 2.160). These results are shown in Figure 3.



**Figure 3.** Ranking of mentor motivation from the VFI/VMI with multi-valued mapping.

Comparing the results of the combined VFI and VMI with those of just the VMI, the function ranking for the overall group remains relatively stable, with only a couple minor changes. The most noticeable of these changes is the switch in ranking between *Reactivity* and *Social Interactions*. This change in ranking is a slight difference, moving *Reactivity* from the 4<sup>th</sup> ranking in the VMI to the 6<sup>th</sup> ranking in the VFI/VMI combination. This shift is balanced by an equal shift of the *Social Interactions* function, moving from 6<sup>th</sup> in the VMI to 4<sup>th</sup> in the VFI/VMI. These overall trend differences can be seen by comparing the volunteering motivation ranking in Figure 2 and Figure 3. These two charts graphically display the average Likert scores for both methods of analysis, and show that the general trends of volunteering motivations stay relatively in the same order. If the extra motivational categories from the VMI are removed, then the ranking of the functions from the VFI/VMI is the same result as the VMI, which is the same result as the VFI. Analyzing the VFI, the VMI, and the VFI/VMI result in the same motivation ranking for the six core functions: *Values*, *Understanding*, *Career Development*, *Self-esteem*, *Protective*, and *Social*, in that order.

Breaking the VFI/VMI analysis down into genders and mentor experience describes more possible trends in mentor mentality. For the gender analysis of the VFI/VMI, Table 4 summarizes the order.

**Table 4.** Comparison of mentor gender for motivation ranking of VFI/VMI.

<b>Ranking</b>	<b>Male Mentor Motivation (Average Score)</b>	<b>Female Mentor Motivation (Average Score)</b>
1	Values (4.112)	Values (3.982)
2	Recognition (3.540)	Reciprocity (3.210)
3	Understanding (3.433)	Recognition (3.193)
4	Social Interactions (3.391)	Social Interactions (3.105)
5	Reciprocity (3.355)	Reactivity (3.017)
6	Reactivity (3.145)	Understanding (2.971)
7	Career Development (2.817)	Career Development (2.876)
8	Self-esteem (2.597)	Protective (2.088)
9	Protective (2.414)	Self-esteem (2.040)
10	Social (2.345)	Social (1.910)

From the gender comparison, the largest difference can be seen in the rank that male mentors place *Understanding*, 3<sup>rd</sup>, and the rank that female mentors place it, 6<sup>th</sup>. This shift in rank comes with the female mentors favoring *Reciprocity*, 2<sup>nd</sup>, where the male mentors list it as 5<sup>th</sup>. Again, the leading motivation for volunteering is the *Value* function and the results of the VFI/VMI yield a higher importance on *Social Interactions* and place less emphasis on the self motivating *Reciprocity*, *Recognition*, and *Reactivity* functions.

Comparing the rankings of the returning mentors and the new mentors with the VFI/VMI scores produces the results displayed in Table 5. From these rankings, the most difference in ordering is noticeable. The functions that differ in positions by 3 or 4 ranks are *Reciprocity*, *Recognition*, *Understanding*, and *Reactivity*. Returning mentors provide a ranking order that places importance on *Value* and *Understanding*. The new mentors focus on the *Recognition* and *Reactivity* of the experience. Both groups place little emphasis on the *Protective* function and the *Self-esteem* function.

**Table 5.** Comparison of mentor experience to show effect of motivation ranking for VFI/VMI.

<b>Ranking</b>	<b>Returning Mentor Motivation (Average Score)</b>	<b>New Mentor Motivation (Average Score)</b>
1	Values (4.511)	Values (3.685)
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5	Recognition (3.282)	Career Development (3.189)
6	Reactivity (3.139)	Reciprocity (3.079)
7	Career Development (2.926)	Understanding (2.588)
8	Self-esteem (2.889)	Protective (2.141)
9	Social (2.763)	Self-esteem (1.897)
10	Protective (2.440)	Social (1.667)

### Conclusions

From all of the different analyses and methods of inventory scoring, the general trends that are observed are fairly strong and consistent among DREAM mentors. The overwhelming majority of mentors are primarily motivated by their *Values* and the vision of helping others for humanitarian reasons. Interestingly, scores are shifted between males and females, with males tending to have overall inflated scores as compared to females. This suggests the interval nature of the Likert scale should be further validated. For all mentors, the top-middle of the motivation rankings is composed of various functions, but there is consistency in that the *Understanding* function tends to be rated fairly high (2<sup>nd</sup> or 3<sup>rd</sup>) among experienced mentors, and the presence of *Reciprocity*, *Reactivity*, and/or *Recognition* appears in the top three motivations independent of grouping. *Social Interactions* and *Career Development* functions tend to round out the bottom-middle of the range. Consistently, there is observed to be a lack of motivation based on *Self-esteem*, *Social*, or *Protective* functions.

These findings can be utilized to aid the program in the recruitment and retainment of mentors. For both new and returning mentors, some of the top motivating functions include *Values*, *Understanding*, *Reciprocity*, *Reactivity*, and *Recognition*. As *Values* was found to be the highest ranking motivation for new and returning mentors, appealing to the value system of mentors could be used as a recruiting tool and a way to keep mentors involved. By consistently and repeatedly sharing the long-term vision of DREAM with the mentors, the humanitarian aspects of the program can be more acknowledged. This may also encourage those motivated by *Reciprocity* (the belief that ‘what goes around comes around’) to continue volunteering. Another highly ranked motivating function that can be used to help recruit and retain mentors is *Understanding*. Encouraging returning mentors to share what they have learned through their volunteering experience may help inspire others to volunteer. It may also resonate with those motivated by *Reactivity* to hear how others’ experiences helped them ‘heal’ or grow. In addition, actively recognizing volunteers’ skills may serve to encourage those motivated by the *Recognition* function to join DREAM and remain committed to the program. In the future, DREAM aims to use this research to grow stronger and attract more mentors.

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