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# Guided Path to Success: Cohort 2 (AY2016-2017)

*Does GPS Improve the Academic Success of Students?*

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*Does GPS Improve the Academic Success of Students?*

## Introduction

What is Guided Path to Success (GPS)? GPS is Moorpark College's program for first year students, targeted at students who are at risk for dropping out. This "first year experience" program is designed to help students succeed by giving them exposure to the college campus prior to school starting (summer-bridge); encouragement; priority registration; and increased support during the semester. Additionally, students receive a few school supplies at no charge and are able to access printing for free.

In 2016 Moorpark College developed the GPS program based upon a review of other community college "first year experience" programs. Faculty and administrators visited campuses with similar programs, such as that at Pasadena City College, in an effort to glean lessons learned. Based upon these lessons learned, a workgroup made up of three Deans, instructional faculty, counseling faculty, and staff, designed the GPS program to meet the needs of Moorpark College's first year students. Like other colleges, the program is geared toward those who are first generation college students. This report addresses the 2nd year of the GPS program, while currently (2018-19) GPS is in its' third year.

**Parent Orientation**

## Recruitment

Recruitment for the first cohort of GPS was actively conducted by going out to each of the feeder high schools, explaining the program, and inviting students to sign-up. The vast majority of students who attend Moorpark College come directly from high school, hence, recruiting at local high schools.

### Who is Eligible?

Students are eligible to participate in GPS if they are beginning their first semester of college. They must also agree to participate in all components of the program.

## Program Requirements

The GPS program is made up of a variety of activities designed to support students and guide them through their first year of college. These components are intended to start students off on the "right track." Students are required to participate in the ways list in the table to the right or they are dropped from the GPS program. The intention here is not punitive, but rather,

| Required Participation | Time |
|---|---|
| Summer Kick-Off "Arrival Survival" | 2 days |
| Parent Orientation | 1 day |
| Enroll in College Strategies course | 1 semester |
| Meet with Coach | 1x/month |
| Respond to Coach within 24 hrs | Year 1 |
| Meet with Counselor | 1x/semester |
| Must maintain FT status (12+ hrs) | Year 1 |
| Take math and English | Year 1 |
| Complete GPS Passport (10 GPS activities) | Year 1 |
| Spring Reconnect | 1 day |
| Year End Celebration | 1 day |

encouraging adherence to the program. In our report on the first cohort, we found that meeting with the counselors and the monthly coaching have the greatest impact on students' academic achievement. GPS students also benefit from the priority registration they receive as part of the program and tutoring is offered to students, if needed.

## Research Questions

We wanted to know if the GPS program increases the academic success of students. Specifically, does GPS improve the retention of students? Do GPS students have higher GPAs than their counterparts?

**Hypothesis 1:** GPS participants will be more likely to be retained to the Spring semester.

**Hypothesis 2:** GPS participants will be more likely to be retained one year later.

**Hypothesis 3:** GPS participants will have higher Grade Point Averages (GPAs).

## Academic Motivation

Student's high school GPA has long been established as a predictor of college success. Historically speaking, many community colleges have not regularly received GPA from high schools or it is often not reported by students applying to the college. While self-reported high school GPA has been shown to be highly accurate, it is not widely reported on Moorpark College applications. The application for California community colleges (CCCapply) is undergoing some changes in which high school GPA would be collected; however, at the time of this study it was only being piloted. Moreover, academic motivation has been found to be a reliable proxy for high school GPA.

The idea is that what makes high school GPA an important predictor is not so much sheer *ability* but the student's academic motivation, which impacts GPA and success in school. It would be necessary to include motivation in our research if only for its effect on GPA and retention; however, motivation could also differentiate who self-selected to participate in the GPS program. That is to say, academic motivation could be a driving force behind students choosing to participate in GPS. Those with greater academic motivation may be *more likely* to choose to participate, thus, it is important that we include measures of academic motivation not only as predictors of academic success, like we would GPA, but also to control for differences among students.

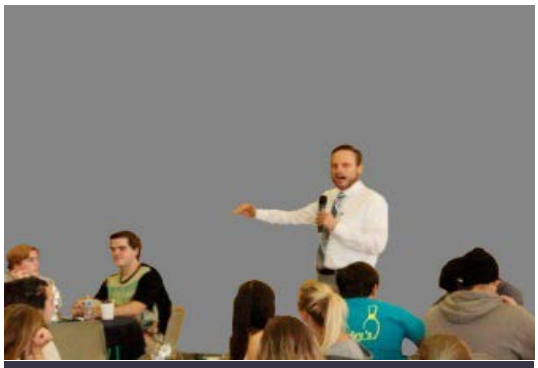
There are three main components established in the psychological literature on motivation—intrinsic motivation, extrinsic motivation, and amotivation. As Vallerand et al. (1999) explain, *amotivation* is believing one's behavior is caused by forces out of one's control; not being motivated intrinsically or extrinsically.[i] *Extrinsic motivation* is being motivated by external factors or "as a means to an end," not for the sake of the behavior specifically.[i] *Intrinsic motivation* is being motivated to do an activity for itself and/or for the pleasure derived from participation.[i] This is theorized as the most important factor in academic success.

Because we were not able to obtain high school GPA for our sample, we collected data on the Academic Motivation Scale (AMS) developed by Vallerand et al. to assess students' academic motivation.[i] The AMS was administered to students participating in GPS and other students entering Moorpark College at the beginning of the Fall semester 2016.

# Methods

We employed a mixed-methods, quasi-experimental design for this research study. A quasi-experimental design includes a control group in contrast to the intervention/experimental group but does not have random assignment of subjects as in a traditional experimental design. For programs in which participants self-select into, something could be different about those who choose to participate. In this case, several factors could influence the student to self-select into the program: student's academic motivation, first generation status (nervousness about attending college when you are the first in your family to go), or low-income status (needing financial support).

To control for those differences that may affect self-selection we utilized Propensity Score Matching (PSM) to identify a matched sample on several characteristics. This gives us confidence that our control and intervention groups are as similar as possible and allows us to evaluate the intervention (in this case, the GPS program) for its effectiveness.



**Dean Howard Davis with GPS students**

Additional methods included surveying students regarding their experience with the GPS program. At the conclusion of the academic year (2017-2018) we asked students what they liked best about the program and *where they saw themselves in the next 5 years.*

## Academic Motivation Scale

To assess student academic motivation we administered the Academic Motivation Scale (AMS) to first-time college students via paper in English or Spanish at the beginning of the Fall semester, 2017. The AMS was developed by Vallerand et al. to assess for academic motivation in college which has a well-established link to positive educational outcomes—persistence, learning, curiosity, and performance.[i] The AMS primarily measures intrinsic and extrinsic motivation, or "one's perceived reasons for engaging in a given activity (the "why" of behavior)...for the activity itself or for reasons lying outside the activity".[i] It is also the first scale which measures amotivation.

A total of 582 Moorpark College students enrolled in Fall 2017 attempted the AMS. The scale measures 7 different factors on a scale of 1 to 7, from *"does not correspond at all"* to *"corresponds exactly"*. Below we explain each of the 7 different factors measured by the AMS.

### *Intrinsic Motivation*

#### Toward Accomplishments

As defined by Vallerand et al., intrinsic motivation Toward Accomplishments is "engaging in an activity for the pleasure and satisfaction when one attempts to accomplish or create something."[i] One example provided by the developers is a student who extends their *work beyond requirements for the satisfaction of trying to surpass themselves.* The AMS measures intrinsic motivation toward accomplishments with 4 items.

### To Know

Intrinsic motivation To Know is defined by Vallerand et al. as "performing an activity for the pleasure and satisfaction that one experiences while learning, exploring, or trying to understand something new."[i] The AMS measures intrinsic motivation factor To Know with 4 items.

### To Experience Stimulation

Another aspect of intrinsic motivation, to Experience Stimulation, is when one engages in an activity for the "stimulating sensations" one experiences during such as "sensory pleasure, excitement, or aesthetic experiences."[i] The AMS measures intrinsic motivation to Experience Stimulation with 4 items.

## *Extrinsic Motivation*

### External Regulation

Extrinsic motivation External Regulation is explained as participating in an activity due to external forces, constraints, or rewards.[i] As mentioned earlier, extrinsic motivation is different than intrinsic motivation in that motivation is not for the activity *itself* but for external influences. The AMS measures extrinsic motivation External Regulation with 4 items.

**Making new friends**

### Introjected Regulation

As explained by Vallerand et al., extrinsic motivation Introjected Regulation is being motivated to act by reflecting on past external contingencies.[i] The person begins to internalize reasons for their actions.[i] The AMS measures Introjected Regulation with 4 items.

### Identified Regulation

Similar to Introjected Regulation, extrinsic motivation Identified Regulation is when the activity is valued or becomes important to the person, and the person has internalized the external contingency.[i] This is identification when the activity is *viewed as chosen by self*. The activity then "becomes regulated through their identification."[i] The AMS measures Identified Regulation with 4 items.

## *Amotivation*

Amotivation is an aspect of motivation, Vallerand et al. explain, in which "one perceives that their behavior is caused by something out of their control, i.e., they do not perceive contingencies between outcomes and their own actions."[i] People high on Amotivation are not intrinsically or extrinsically motivated. As Vallerand et al. say, "they feel undeceived and start asking themselves 'why in the world they go to school'."[i] *It has been said that people high on amotivation will eventually stop participating in academic activities.*[i] Amotivation is measured with 4 items on the AMS.

# Analysis

Data analysis was conducted using descriptive statistics, t-tests, and chi-squares with SPSS v24.1. Ordinary Least Squares (OLS) regression was used to analyze *student GPA* outcomes with student

background predictors. We analyzed binary outcomes of being *retained* to the Spring 2018 semester, as well as *annual retention*, with logistic regression[ii].

## Sample

We started with 160 students enrolled in the 2nd cohort of the GPS program and 214 non-GPS students (available for the control group) *with complete data* on the academic motivation scale (AMS) and demographic variables. These are the students who were eligible for matching.

In order to obtain a control group for the GPS intervention, we performed Propensity Score Matching (PSM) using Nearest Neighbor with a 1:1 match ratio. Student GPS participants were matched on key demographic variables and academic motivation factors: gender, age, race, first generation status, intrinsic motivation-to know, intrinsic motivation-to accomplish, intrinsic motivation-to experience stimulation, extrinsic motivation- external regulation, extrinsic motivation- introjected regulation, extrinsic motivation- identified regulation, and amotivation.

The resulting sample consisted of 308 cases: 154 in the intervention group (GPS) and 154 in the control group. Over a quarter of the students who participated in GPS (28%) were the first to go to college in their family—first generation college students. Approximately 62% were classified as young, 18 years old and just over half (54%) were female. Similarly, just over half were non-white (55%), of whom, 42% were Hispanic. GPS students received counseling services over one year for an average of 1.25 hours or 78 minutes. This is based upon data recorded in GradesFirst. In addition, GPS students received an average of 3.6 hours (218 minutes) of coaching.

| | GPS (n = 154) | | Control (n = 154) | | Sample | St. Dev. |
|---|---|---|---|---|---|---|
| | Mean | St. Dev. | Mean | St. Dev. | Mean | |
| Age | 18.40 | .517 | 18.64 | .703 | 18.52 | .628 |
| Young (18 yo.) | .62 | .488 | .49 | .502 | .56 | .498 |
| Female | .53 | .501 | .55 | .499 | .54 | .499 |
| Non-white | .55 | .499 | .53 | .501 | .54 | .499 |
| Black | .02 | .139 | .03 | .178 | .03 | .159 |
| Hispanic | .42 | .494 | .38 | .488 | .40 | .491 |
| Asian/Pacific Isl. | .05 | .223 | .06 | .235 | .06 | .229 |
| Other | .06 | .247 | .05 | .223 | .06 | .235 |
| Other Non-White *(excludes Hispanic)* | .14 | .344 | .14 | .351 | .14 | .347 |
| First Generation | .28 | .453 | .24 | .428 | .26 | .440 |
| **Extrinsic Motivation** | | | | | | |
| External Regulation | 22.94 | 4.96 | 22.87 | 4.74 | 22.91 | 4.84 |
| Introjected Regulation | 20.81 | 5.82 | 20.27 | 5.96 | 20.55 | 5.89 |
| Identified Regulation | 23.90 | 4.12 | 23.51 | 4.56 | 23.71 | 4.34 |
| **Intrinsic Motivation** | | | | | | |
| To Know | 21.70 | 4.84 | 21.60 | 5.19 | 21.65 | 5.01 |
| Toward Accomplishment | 18.96 | 5.61 | 18.44 | 6.23 | 18.70 | 5.93 |
| To Experience Stimulation | 15.43 | 5.83 | 15.18 | 5.74 | 15.31 | 5.78 |
| **Amotivation** | 5.89 | 3.05 | 5.97 | 3.83 | 5.93 | 3.46 |
| GPS Minutes Coached | 215.15 | 92.61 | -- | -- | -- | -- |
| GPS Minutes Counseled | 78.33 | 41.46 | -- | -- | -- | -- |

This cohort was very similar in composition to the demographics of the inaugural GPS cohort. The exception is a slightly larger population of GPS students who were *first generation* (28% vs. 25%) and a more balanced proportion of females to males (56% and 44% vs. 66% and 33%). The table above shows demographics of the GPS sample and the control group, and the overall sample descriptive statistics.

# Results

## Retention

Borrowing from the work of the RP Group[ii], for the purposes of this report **retention** *is defined as continuing on to the following semester and attempting at least 12 units at Moorpark College.* This is often referred to as "persistence."

### Does GPS improve retention rates to the Spring semester?

A part of the GPS program is the requirement that students stay enrolled, full-time, for the whole academic year. Thus, one could assume that the GPS program would increase retention rates simply due to this requirement for participation. While it is a program requirement that students maintain a full-time status in order to stay in the GPS program, it should be noted that if the program *was* not successful, students either would not maintain a full-time credit load and would be dropped from the program due to not meeting the requirements, or students would voluntarily drop out of the program. These students may still remain at Moorpark College but would likely be taking fewer than 12 credits.

**Relationships**

We tested this hypothesis with Logistic Regression as seen in the table on the following page. We tested whether GPS has an effect on the retention of students from fall to spring semesters, retaining a full-time credit load, as seen in Model 2. *It is clear that GPS increases the likelihood that students will return and maintain a full-time credit load into the Spring semester.* Looking at Model 2 we can see that, overall, students participating in GPS are 3 times more likely, than their non-GPS counterparts, to return in the Spring semester as a full-time student.

> *Looking at Model 2 we can see that students participating in GPS are **3 times** more likely to return in the Spring semester as a full-time student.*

In Models 3, 4, and 5 we tested GPS participation in combination with time coached, with time counseled, and then and three GPS features together. The three models demonstrate that the key aspect of the GPS program which has an effect on retention to Spring is coaching. Minutes coached is significant in Model 3 where we pair it with GPS participation, and in Model 5 where we include it with minutes counseled and GPS participation. While coaching is not specifically measured in Model 4, it would be picked up in the general GPS participation (because all GPS students receive coaching from Student Success Coaches), and in this case the effect is larger than it is in Model 2 where GPS participation is measured alone. That is, Model 4 shows that GPS students are 3.4 times more likely to return in the Spring semester at FT status, compared to Model 2 which shows 3 times more likely. Overall, the models presented below suggest that **the primary mechanism by which GPS impacts retention is through the coaching that students receive.**

*GPS Effect on Retention to Spring Semester (FT) Using Firth Logistic Regression*[ii]

| | Model 1 Odds Ratio | Model 2 Odds Ratio | Model 3 Odds Ratio | Model 4 Odds Ratio | Model 5 Odds Ratio |
|---|---|---|---|---|---|
| *Intercept* | 2.489** | 1.627 | 1.406 | 1.624 | 1.391 |
| *Female* | 1.018 | 1.066 | 1.047 | 1.073 | 1.062 |
| *Young (18 yos.)* | 1.313 | 1.149 | 1.275 | 1.141 | 1.264 |
| *Hispanic* | 0.882 | 0.876 | 1.113 | 0.886 | 1.146 |
| *Other Non-White* | 0.849 | 0.833 | 1.017 | 0.834 | 1.029 |
| *First Generation* | 0.623 | 0.562 | 0.517 | 0.556 | 0.507 |
| ***Intrinsic Motivation*** | | | | | |
| *to Experience Stimulation (standardized)* | 1.046 | 1.062 | 1.061 | 1.060 | 1.041 |
| *to Know (standardized)* | 0.706 | 0.748 | 0.748 | 0.749 | 0.760 |
| *Toward Accomplishments (standardized)* | 1.828* | 1.779* | 1.675 | 1.797* | 1.689 |
| ***Extrinsic Motivation*** | | | | | |
| *External Regulation (standardized)* | 1.465* | 1.542* | 1.679* | 1.542* | 1.675* |
| *Introjected Regulation (standardized)* | 0.603* | 0.571* | 0.589* | 0.569* | 0.589* |
| *Identified Regulation (standardized)* | 1.112 | 1.067 | 1.014 | 1.070 | 1.016 |
| ***Amotivation (standardized)*** | 0.908 | 0.907 | 0.886 | 0.908 | 0.888 |
| *GPS (vs. control)* | -- | 3.053** | 0.664 | 3.401** | 0.772 |
| *GPS Minutes Coached (Fall)* | -- | -- | 1.021** | -- | 1.021** |
| *GPS Minutes Counseled (Fall)* | -- | -- | -- | 0.996 | 0.994 |

**: p value < .01
*: p value < .05

## Does GPS improve annual retention rates?

We also looked at whether or not participation in GPS improved annual retention (returning the Fall semester, 1 year later). The first model in the table on page 8 shows you that in our sample there were *no differences* in annual retention among special population demographic groups. Model 1 does show that students higher on the intrinsic motivation factor Toward Accomplishments and the extrinsic motivation factor External Regulation are *more likely* to return in the Fall and take a full-time credit load, whereas students higher on Introjected Regulation (extrinsic motivation factor) are *less likely*.

In Model 2 we test GPS participation in general, while controlling for demographics and academic motivation. Here we see that **GPS students are 2.7 times more likely than their counterparts to return in the Fall at full-time status.**

In this same model we find that two academic motivation factors have persistent, positive effects on annual retention—intrinsic motivation-Toward Accomplishments and extrinsic motivation-External Regulation—whereas one motivational factor has a persistent negative effect: extrinsic motivation-Introjected Regulation. This negative effect is eliminated in Model 3.

*GPS Effect on Annual Retention (1 Year Later) of Full-Time Students, Using Firth Logistic Regression*[ii]

| | Model 1 Odds Ratio | Model 2 Odds Ratio | Model 3 Odds Ratio |
|---|---|---|---|
| *Intercept* | 1.687 | 1.138 | 1.084 |
| *Female* | 1.075 | 1.126 | 1.060 |
| *First Generation* | 0.651 | 0.590 | 0.600 |
| *Young (18 yos.)* | 1.195 | 1.047 | 1.095 |
| *Hispanic* | 0.794 | 1.273 | 0.875 |
| *Other Non-White* | 0.711 | 0.710 | 0.771 |
| ***Intrinsic Motivation*** | | | |
| *to Experience Stimulation (standardized)* | 1.331 | 1.372 | 1.336 |
| *to Know (standardized)* | 0.798 | 0.828 | 0.833 |
| *Toward Accomplishments (standardized)* | 1.692* | 1.674* | 1.677* |
| ***Extrinsic Motivation*** | | | |
| *External Regulation (standardized)* | 1.870** | 1.984** | 2.092** |
| *Introjected Regulation (standardized)* | 0.595* | 0.564* | 0.560 |
| *Identified Regulation (standardized)* | 0.890 | 0.854 | 0.815 |
| ***Amotivation*** *(standardized)* | 0.805 | 0.795 | 0.790 |
| *GPS (vs. control)* | -- | 2.654** | 0.712 |
| *GPS Minutes Coached (per 10 minutes)* | -- | -- | 1.073** |
| *GPS Minutes Counseled (per 10 minutes)* | | | 1.021 |

**: p value < .01
*: p value < .05

To look further at the GPS program, we included in the model the time that GPS students were coached and counseled. Model 3 then takes into account the relationships, supplies/resources, and the intangibles that come with being a part of the GPS program (GPS participation); time counseled; and time coached that are hallmarks of the program. The one aspect of the GPS program that is statistically significant, as shown by Model 3 in the table above, is the GPS coaching. Thus, **it appears that the primary way that the GPS program increases the likelihood that students are retained *one year later* is through the coaching offered via the Student Success Coaches.** Holding all else equal, for every 10 minutes of coaching, GPS students are 7% more likely to enroll one year later with a full-time credit load.

**External Regulation:** being motivated by other people's responses (positive or negative) to one's actions. For example, *the praise* of a teacher or parent, or *negative consequences* inflicted for not doing something.

**Toward Accomplishments:** being motivated by the satisfaction of achieving things. The accomplishment may be viewed as the process over the end product.

**Introjected Regulation:** the person internalizes reasons for his actions which are based upon past contingencies they experienced.

-See Vallerand et al (1992)

Some academic motivation factors have persistent effects on annual retention of students. In Model 3 we see that the positive effect of the intrinsic motivation factor, Toward Accomplishments is stable, while the positive effect that the extrinsic motivation factor External Regulation increases slightly.

That is to say Model 3 shows us that once we factor in the time that GPS students were counseled or coached, the effect that a student's External Regulation has on annual retention becomes more pronounced. For every one standard deviation above the mean on the External Regulation scale, all else being equal, students are 2.1 times more likely to return one year later with a full-time credit load. Likewise, for every one standard deviation above the mean on the intrinsic motivation factor, Toward Accomplishments, students are 68% more likely to be retained one year later (at full-time status).

Taken together, all three models show that **the students who are at greatest risk for not being retained are those higher on the extrinsic motivation factor Introjected Regulation.** For every one standard deviation above the mean on Introjected Regulation, holding all else equal, students are *44% less likely* to be retained one year later with full-time status. **And yet, the coaching that GPS students receive removes this effect on annual retention.**

### *Comparing Cohort 1 and Cohort 2*

There are some notable differences between the students in this sample and the sample from our first report in regards to annual retention. This sample did *not* have any differences between groups (females vs. males, Hispanic vs. Whites, young vs. older, etc.) in regards to retention. In contrast, our first report, for example, had a sample (i.e., cohort and matched sample) with statistically significant difference in annual retention between young students and those over the age of 18.

One possible explanation for the lack of group differences in this sample could be that, in regards to age, students were much closer in age (18-20) in this report in comparison to the first sample (18-22). Additionally, this sample was more evenly distributed with males and females, whereas our first sample was 60% female.

My mom originally signed me up for GPS. I was reluctant to be a part of the program, but after experiencing it for myself, **I would recommend GPS to all first year students.** This program helped me by putting me on the right track in my major and class schedule. They were even able to help get me a job at the school, which has made managing time significantly easier. – Student "H"

I really liked how the program gave us information on a lot of transfer details that I would not have known had I not participated in GPS. I feel much more prepared and aware of what I need to have done thanks to GPS giving me guidelines, encouraging regular [coaching] appointments, and showing all options I have. I also liked the priority registration, of course, but also the guidelines and help with choosing the right classes for the fall semester. – Student "C"

Without this program I would have felt lost when it came even to applying online for classes. This program helped me learn how to apply for classes and set my path with ease. – Student "C"

I feel like without GPS, I would've been completely lost this year. The monthly meetings with success coaches was a lot more help than I thought it would've been. It gave me a place to air out my concerns and hear possible solutions. The ability to know that I had the help I need was extremely helpful. – Student "A"

I like how my coach would help me with things I was not sure about, like emailing my professors. Basically, the advice they gave me helped me out a lot. – Student "C"

I loved that GPS **felt just like a family to me**, there were father-figures, mother-figures, and some annoying sister-figures. Overall, this experience was great and I was reminded of my "family" in Apollo. – Student "L"

The most amazing thing the GPS provided for me was **the support with my classes** and they found a tutor for me when I needed it. They helped me through tough decisions with school and they gave the best advice. – Student "B"

**Motivation – Celebrate!**

**New Friends**

In the GPS program, I liked that I always had someone to turn to if I had academic concerns or personal struggles. My GPS success coach helped me in so many ways. The GPS program really is a community and has a family like environment that makes you feel comfortable and cared about. If it wasn't for the aid of the GPS counselors and coaches, I would probably spend 3 to 4 years at Moorpark community college total, but thanks to their help, I will graduate from Moorpark in one more year. I am very fortunate to have been able to participate in this program. – Student "E"

**Persistence – End of the Year**

**Spring Reconnect: Jesus Vega and Eddie Beltran get smacked with a pie!**

# Academic Success

## Do GPS students have higher GPAs at the end of 1 year?

In order to show the distinct differences between race/ethnic groups we include both a Hispanic variable and a second variable called Other Non-White which combines all other non-white racial groups due to small group sizes. The first model displays the effect of demographic variables and academic motivation factors on GPA. The table on the next page shows in, Model 1, that Hispanic race, External Regulation, and Amotivation each have a significant effect on student GPA.

It appears that GPS does increase the academic success of students as indicated by GPA. Model 2 shows us that **participating in the GPS program increases students' grade point averages (GPA), by nearly half a point.** That is to say that, after one year of participation in GPS (by the end of Spring 2018), the cumulative GPA of GPS students were, on average, .40 points higher than the control group. General group participation, or "GPS," has the largest effect on cumulative GPA of the variables in our study.

***What is Amotivation?***

Amotivation is not being intrinsically or extrinsically motivated but believing your behavior is caused by something out of your control.

*- Vallerand et al. (1992)*

Among student population groups, the largest differences in GPA exist between Hispanics and whites (.33). Other controls such as Amotivation and External Regulation have small but significant effects on GPA. Specifically, Model 2 shows us that for each additional point on the External Regulation scale, student cumulative GPA increases by .053 points. In contrast, there is a negative relationship between Amotivation and GPA—for every point students move up the Amotivation scale, their cumulative GPA drops by .06 points.

Model 3 shows us that although counseling and coaching received through the GPS program do not have direct effects on GPA, **they do eliminate the differences in GPA between Hispanics and whites, and remove the effect of External Regulation on GPA.** We can see this by looking at Model 2 compared with Model 3, where in Model 3 the odds ratios are no longer significant for Hispanic or External Regulation.

While the effect that Amotivation has on cumulative GPA is not removed, the negative effect is small and is marginally reduced after including GPS counseling and coaching in the model. This indicates that students' Amotivation has a persistent negative effect, albeit small (.045), on GPA that may be beyond what the GPS program can address with students.

Everything ya'll did really helped me out with me becoming more positive, confident, and be more social with people….– Student "P"

This model (3) explains 27% (R2) of the variance in cumulative GPAs among students.

GPS Effect on Cumulative GPA Using Multiple Regression

| | Model 1 (R2 = .107) | Model 2 (R2 = .140) | Model 3 (R2 = .273) |
|---|---|---|---|
| Intercept | 2.914** | 2.715** | 3.805** |
| Age (standardized) | -.100 | -.036 | .037 |
| Female | .157 | .182 | .160 |
| Hispanic | -.327* | -.325* | -.288 |
| Other Non-White | -.040 | -.044 | -.069 |
| First Generation | -.235 | -.272 | -.121 |
| **Extrinsic Motivation** | | | |
| External Regulation | .050* | .053* | .035 |
| Introjected Regulation | -.029 | -.032 | -.014 |
| Identified Regulation | -.022 | -.024 | -.015 |
| **Intrinsic Motivation** | | | |
| to Experience Stimulation | -.002 | -.001 | -.027 |
| to Know | -.001 | .003 | -.013 |
| Toward Accomplishments | .018 | .016 | .018 |
| **Amotivation** | -.059** | -.060** | -.045* |
| GPS (vs. control) | | .400** | -- |
| Minutes Counseled (GPS) | | | -.014 |
| Minutes Coached (GPS) | | | .003 |

*: p value < .01
*: p value < .05

These models look very similar to what we found in our first report on GPS. With a similar R2 in Model 3, or total variance explained (R2 of .266 when minutes coached or counseled were included in Cohort 1), and similar effects for Hispanics and Amotivation on GPA. **Overall, GPS participation leads to students earning a GPA that is nearly half a grade point (.40 points) higher, on average, than that of non-GPS students (see Model 2).**

In contrast to Cohort 1 (see Year 1 report), External Regulation showed a positive effect on GPA while some internal motivation factors did *not* have an effect on GPA. Additionally, there were no statistically significant differences between females vs. males, younger vs. older students, and first generation vs. later generation students in our matched population.

In summary, this analysis shows us that the counseling and coaching GPS students receive is effective in eliminating the impact of certain academic motivation factors on GPA as well as the differences in GPA present between various racial groups. More discussion on how these results compare with results from the first cohort are provided in the Discussion and Conclusion sections of this report.

Monthly Coaching Meetings

A Quiet Place to Study

Printing

Direction from Counselors

Priority Registration

Scantrons

Feeling Cared For

Family-like Atmostphere

# Discussion

Our analysis shows that GPS is quite effective in improving educational outcomes for students. *Being a part of GPS improves the chances that students will return one year later (annual retention).* Moreover, the more counseling/coaching students receive, the more likely they are to be retained.

**"We did it!"**

In this study of the second cohort we saw group differences in cumulative GPA between Hispanics and whites. While our study of the second cohort did not replicate what we saw with the first cohort, the group differences found (Hispanics vs. whites) *were* eliminated once we factored in the coaching or counseling GPS students received. ***This suggests that, in the future, any group differences seen would likely be washed out through the coaching and counseling provided through GPS.***

Another important observation to make is that programs like GPS *may* be unable to eliminate performance and retention problems due to a students' Amotivation. Our analysis highlights the persistent negative effect of Amotivation despite coaching and counseling. Students who score higher on the Amotivation factor perceive that outcomes are not a result of their actions or believe things are out of their control.

It is unknown if there are  In future years, the GPS program may want to work to target these types of paradigms in their students in an effort to help shift student thinking and lower Amotivation. By coaching students in this targeted way, Amotivation may decrease and subsequently improve grades, retention, graduation and transfer rates.

## What Students Like Best About GPS

In the follow-up we conducted with students at the end of the academic year, we asked them to name 1 or 2 things that they liked best about the GPS program and to tell us where they see themselves in the next 5 years.

### 1. Support from GPS Staff

The number one thing that students report back that they loved is the support from GPS staff. The **monthly meetings with their coaches** provided them with the encouragement they needed to keep going; gave them a push where it was needed; and advice on how to handle life and school situations. The **counseling sessions** gave them direction and helped them carve out a path to reach their identified career/educational goals.

The encouragement they received from their coaches, counselors, and from **Jesus Vega** (Director of GPS) was simply invaluable... they had someone (a group of people!) who believed in them! For some students, this may have been the first time they ever had someone truly believe in them.

They felt that someone was always there to support them on their journey. As one student put it "I really liked…the meetings with our coaches because every time I needed help, they would help me and also gave me a lot of advice."

Some students appreciated the **accountability** and the **extra support** that a required meeting with their coach provided. Students truly felt that the GPS staff genuinely cared, assisted them with the logistics of college, answered their school-related questions, offered advice, and overall, guided them on their path to success! *As another student says, "…you can tell they 100% care about each student and their futures."*

> The fact there was a center I knew I could go to and have the support I needed when I had a concern or question about anything. Always was made felt comfortable and really helped keep me on tract when I felt like giving up. – Student "L"

## 2. A Place to Call "Home"

Second, they loved the family-like atmosphere created by GPS. Students love having **a quiet place** they could go **study or hang-out** and were welcomed. It may be the friends that one makes and builds memories with, or it may be a cohort effect, being around the same group of students going through college for the first semester, sharing similar experiences. There is a warm acceptance that comes with being a part of GPS—**a family-like atmosphere.** It is clear that this can only come from the leadership of the GPS program (Jesus Vega) and filter down to the staff.

Students like being able to walk into a single room, see their friends, and receive a warm greeting. Students want to be known. Most of all they treasure the **relationships** they made and will carry with them for a long time. For some students they made friends they never imagined they could make!

> It was a place I could go to focus on myself and my work. The coaches and counselors made the first year of college a breeze. I went through a traumatic experience and my coach expressed care and sympathy and lead me to the resources I needed. The environment made it so that **I had a family away from home** and allowed me to meet the friends I have now. – Student "M"

## 3. Registration Assistance

The **hands-on assistance** that students receive with registration via GPS counselors is also a favorite aspect of the program. GPS students not only get **priority registration** (allowing students to register at an earlier date ahead of the general student population) but counselors provide direct assistance with registering and overall guidance on which courses to take based upon their interests\career path. At this time students are shown "how to" register so that they are equipped to register themselves in the future.

Many students who are the first in their family to go to college don't have the parental knowledge\support on how to complete the necessary steps to get started with college, like registration. This makes the process very intimidating. It seems that the priority registration and assistance with registration takes

some of the anxiety away that many students have when starting college—how to register, what classes do you choose, will they get the classes they need, and at the times that work for them.

> What I really liked about the program is the SUPPORT! The coaches gave great feedback on what we need to do or improve in our classes or life in general. The counselors have such great advice about classes and are very helpful with the Ed Plan. The second thing I really loved about the program was the love Jesus shares individually. I know he is a hard-working man but he still makes the time to meet with students and make us feel loved and support. And now, not only am I a part of GPS but now I work for Jesus! – Student "A"

### 4. School Supplies

Quite possibly to the surprise of some, some students stated that the free school supplies they received were also a huge help. As part of the GPS program, students are able to **print for free** in the GPS office. In addition, they love the **free scantrons** and one student even mentioned the **mini stapler** they receive. For students who must put themselves through school or who are struggling financially, these school supplies go a long way and help relieve some of the stress they feel especially at the beginning of the year!

## Where Students See Themselves in 5 Years

Most students who participated in GPS have a clear sense of where they are going. The majority of GPS graduates are motivated, confident, hopeful, and clearly directed. Only a select few still exhibit fears about the future and/or remain uncertain about where they will be.

When we asked them where they saw themselves in the next 5 years the vast majority said they saw themselves **graduating from Moorpark College** or finishing up their **bachelor's degree** within the field they have identified. Many GPS graduates also said they saw themselves going on to begin a **master's degree.** While many students have plans to continue their education, many also plan to begin their **career** after graduating with their bachelor's degree. Regardless of whether students mentioned they saw themselves working a regular job or pursuing their master's degree,

For many first year college students, they don't know what they want to do in life and are just beginning to explore their options. At the conclusion of their first year of college, GPS students have identified what their interests are and many of them have picked a career. They know what they need to do to achieve their goals. Overall GPS graduates have a clearer vision, are hopeful, and believe in themselves!

*This further supports our finding from the first cohort that a critical aspect of the GPS program is* ***empowering students to believe they can achieve their dreams and helping students map out their plans to do so!***

# Conclusion

The findings of this second annual report are consistent with the findings from the first cohort of Guided Pathways to Success (GPS) (see LINK). The results show that **GPS is a successful program**, improving retention rates and eliminating differences in GPA across special population groups.

Based upon the first and second annual reports on GPS, overall, we can conclude that GPS improves retention rates through the counseling/coaching received under this program. Additionally, GPS counseling/coaching eliminate significant differences in GPA between demographic special population groups and certain academic motivation factors.

This year with Cohort 2, we were able to go deeper in our analysis, showed that GPS improves retention rates from Fall to Spring primarily **through the coaching received**. Our analysis of Cohort 2 shows that GPS students are 3 times more likely to return in the Spring and 2.6 times more likely to return in one year later (with a full-time credit load). Regarding GPA, we find that coaching received through the GPS program eliminates differences in GPA across special population groups.

Taken together with the qualitative data collected, it is the whole package of GPS which is effective—well-trained, supportive staff; a strong program leader; effective counseling and coaching; positive atmosphere; and an environment conducive to building relationships. Students love the close-knit, family-like atmosphere in GPS where they can just be themselves. Additionally, the free school supplies ease the financial stress many students experience. Students also loved always having a "place to go" where they know positivity will abound and they will receive the support that others believe in them.

This program is similar to what one experiences when they go away to college—"living" in close proximity to other freshman (such as one would in the dorms) and building relationships. In GPS, not only do they build life-long friendships with peers but they build relationships with mentors who believe in them. This is very empowering for college students who may not already have someone who believe they can complete a college degree.

## Future Efforts

As Moorpark College is working towards establishing Guided Pathways and seeking ways to expand the GPS program to provide some support to all students, one area to consider addressing is the academic motivation factor Amotivation, and possibly Introjected Regulation. Amotivation and Introjected Regulation feelings and thought patterns in students had a negative association with GPA or retention. Although it is unknown if there are established methods or programs to do so, Amotivation has shown persistent negative effects on GPA (and retention in the first Cohort) and thus, *could be targeted for students in GPS as well as outside the program.*

If it is decided that Moorpark College would like to address Amotivation (and potentially the extrinsic motivation factor--Introjected Regulation) in some capacity, the Academic Motivation Scale (AMS) would need to be administered to all students before or at the start of their first semester enrolled.

## Final Thoughts

Finally, we conclude with the statement that we think sums up the effectiveness of this program:

> First off, I want to thank the GPS team for really helping me figure out how to college! LOL What I really enjoyed about GPS was that I felt welcomed by everyone, not just the staff but the people in the program as well. THE COACHES ARE AMAZING!!!
>
> Thank you Karyn for listening to me and really understanding what I go through. This program is super amazing and should be recommended to every person thinking of going to Moorpark. I tell all my friends about this program. – Student "A"

I see myself hopefully continuing school to achieve my dreams. – Student "A"

In five years I HOPE to see myself with an associate's degree in natural sciences and transferred to a CSU or UC in a nursing program while working in the field I am trying to pursue. – Student "A"

In five years I see myself graduating from Moorpark College with a Rad Tech degree with a job lined up ready to face the cold harsh grip of becoming a full grown adult. – Student "H"


In 5 years I see myself graduated from a 4 year university. I see a difference in who I am maturity wise. I see myself content with myself for reaching my goals and **see myself as someone who people are proud of.** – Student "M"

I see myself **taking care of my parents** while being the most responsible person in the family. They took care of me and now it's my turn to take of them! – Student "A"

By then, I hope to have **graduated from USC, UCLA, Chapman, or another top-ranked film school.** I will hopefully be climbing the ladder in the film industry and on my way to creating documentaries that encourage others to protect the planet. – Student "N"

In 5 years, I see myself either in further schooling, **especially for my master's in biology.** Hopefully with the knowledge I learned from GPS I can achieve this goal. – Student "C"

Dreams

Graduate school

Career

Happy

Independent

In five years, I will be an elementary school teacher in either Los Angeles or New York City. – Student "E"

I don't know the future is scary and unpredictable. The short answer is happy, I hope I'll be happy. I do hope that in five years I'm done with my business administration degree. With a job, saving up money for my own place. Maybe having a dog. – Student "A"

In 5 years, I see myself with a BFA in Interior design and hopefully working for my MFA. I would like to have a job as well, as a way to pay for school. – Student "L"

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