

## **Tracking Directions and Associations among Key Influencers of Nerian Happiness: Introducing PowerBI in Educational Research**

### **Abstract:**

The study aims to provide an objective view about “Nerian Happiness”. Inspired by the book “Happiness by Design by Dolan (2014), the research study would like to focus on the factors influencing Nerian Happiness and the direction of the factors tested as to its influence, as key influencers of happiness in the San Felipe Neri Parochial School. Methodologically, this study provided key functions in using Data Modelling, thru PowerBI – a Microsoft powered data analyzer and data modeler which will enable the researcher to dig deeper on the analysis of the study. Using a researcher made questionnaire that is validated using Cronbach alpha test, the researchers were able to elicit quantitative responses with regards to the extent of “Nerian” (the moniker for the students of San Felipe Neri Catholic School in the Philippines) happiness towards their teachers and the school. It also looked at the perspective were the school can be recommended to other possible client or stakeholders. The results of the study revealed the varying degree of happiness among students in different grade levels that shows a statistically significant association with the students desire to stay on the school for the next school year, and recommend the school to welcome new clients and stakeholders. The results of study will be utilize to enhance the programs of the Marketing and Promotions department, and enhance school enrollment.

*Keywords:* Educational Research, Power BI, School Promotions, Happiness, Satisfaction

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## **The Problem and Its Background**

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The school is always referred as the student's second home. In this "home", the students were trained on the rudiments of learning while forming them holistically. Talebzadeh & Samkan (2011) explained that happiness is essential to student learning and school experience. Citing the works of Ale Yasin (2001), he associated a happy school environment and an effective student learning. Achievement is boosts when they find emotional support and opportunity to blossom their talents. Student happiness, as objectively explained by Doğan (2014), is the collective product of (1)school engagement and (2) classroom confidence. On the parameters mentioned under school engagement, the role of teacher is significant in 0.00 value (at 0.05 critical value) with 72% extent of correlation, while the whole school environment engagement is significant in 0.00 value (0.05) with 85% extent of correlation.

The San Felipe Neri Catholic School is a Level III Accredited School in the Philippines and has been offering quality Catholic Education for the past 58 years. It has successfully built a network of alumni that has been performing well in the Philippine Industry. Some are educators who choose to teach on their Alma Mater after graduating college. The school is successful in maximizing its curriculum potentials by implementing a Standard Based Instruction framework (SBI) on the conduct of teaching, learning and assessment. It has successfully established a network, from its stakeholders, that will cater to community needs, outreach and extension services. However, like other Private Catholic Institutions, the school has been experiencing slow to moderate decrease on its enrollment since 2015. While financial reason is the leading motivator among the parents to transfer the student to other schools, it is found out that those students who transferred does not transfer to public schools (were education is free and supported by both national government) but to surrounding Private (competitor) schools.

The incident pushes the research department to reflect on the condition of student's satisfaction towards the school and the happiness they felt towards their teachers. By focusing on this two aspects, the study will look on the possible correlation between student's happiness and their (1) stay in the institution and (2) their attitude towards recommending the school to other possible clientele. In the study of Can (2019),

the school may enhance student experience of happiness by improving its (1) curricular offering, (2) school activities, and (3) school facilities. Citing the works of Engels et al. (2004), they explained the strong influence that school expectations and teacher personality provides in honing student's happiness in the school. In their discussions, they mentioned that a happy school environment will lead to high student success. A happy school environment embraces uniqueness, promotes diversity and improves student's life skills.

As used in this study, NERIAN HAPPINESS is objectively defined by the parameters with regards to the student's (1) happiness towards their teachers, (2) happiness towards school, (3) school as worthy of recommending to others, and (4) willingness to stay for the next school year. Coming from the conceptual framework from the book "Happiness by Design by Dolan (2014), it enumerated four aspects of happiness relevant to an organization (1) happiness towards people, (2) happiness towards the organization, (3) happiness towards the entities outside the organization and (4) happiness by having the organization. These conceptual parameters aligns with the categories that constitutes NERIAN HAPPINESS, as used in this study.

## **Research Questions**

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This study sought to objectively measure "happiness" of the students towards the school. Using survey method, the students will quantify their experience of happiness towards (1) their teachers and (2) towards the school. This study hypothesize that knowing the extent of happiness among the students to the teachers and to the school will significantly effect the chance by the school (1) to be recommended to other clienteles. This study also posits that the happiness of the student in the school will (2) affect their stay in the institution. Specifically, this will answer the following questions:

1. What is the demographic profile of the respondents?
2. What is the extent of happiness of the respondents in the parameters provided?
3. Is there a significant difference, if respondents are grouped into their demographic profile and their level of happiness?
4. What satisfies Nerian Happiness?

## 5. What are the Key Influencers in the development Neria Happiness?

### Methodologies

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The researcher used a descriptive – correlational design to assess the association between the demographic profile of the respondents and the degree of Neria Happiness. The design is a form of quantitative research that aims to describe the relationship or association of variables by providing an indication of how one variable may influence or predict another.

The instrument of the research is a researcher – made questionnaire that uses a 4 – scale likert response. It was validated by two experts in the field of educational management and statistics. The researcher also considered assessing its internal consistency using a Cronbach alpha test which resulted to 0.82 value. The Cronbach alpha value allowed the researcher to continue with the formal data gathering. A total of 614 respondents was collected who are students of San Felipe Neri Catholic School. The data collection happened last March 2020.

For the statistical computations, descriptive statistics was used to provide the extent of NERIAN Happiness based on the categories used on the survey. Weighted mean was used to compute the data collected from the likert survey while frequency count was utilized for the demographic profile. Analysis of Variance was used to measure the statistical difference between demographic groups vis – a – vis NERIAN Happiness.

Furthermore, a statistical software called PowerBI was used to enhance the statistical analysis and delve deeper on the possible associations between variables. Using the visualization properties of the PowerBI, *key influencers* will be analyzed and the extent of its impact to the variable will be measured. Even the percentage of increase and decrease of the key influencers was measured using visuals and programmable statistical algorithms.

## Results, Analysis and Discussions

### Demographic Profile of the Respondents

Demographic Profile	Frequency	%
<b>Sex</b>		
Male	255	41.5%
Female	359	58.5%
<b>Grade Level</b>		
Grade 6	10	2%
Grade 7	92	15%
Grade 8	35	6%
Grade 9	144	23%
Grade 10	142	23%
Grade 11	78	13%
Grade 12	113	18%
<b>Total</b>	<b>614</b>	<b>100%</b>

For the variable sex, majority of the respondents are female; they are 359 in number or 58.5% of the sample population. On the other hand, 255 respondents are male or 41.5% of the sample. As for the grade level, Grade 9 has the highest number of participants; it has 144 participants out of 614, or 23%. Next, respondents from Grade 10 has 142 participants or 23%. Third in rank are the Grade 12 participants which has 113 or 18%. The least number of participants came from Grade 6 that has 10 or 2% and Grade 8 with 35 or 6%.

### Extent of Nerian Happiness: Descriptive Analysis

<i>Descriptive Statistics</i>			
	N	Mean	Std. Deviation
Nerian Happiness	614	5.15	1.02729
		<b><i>Moderately Happy</i></b>	
Happiness towards Teachers	614	5.07	.95868
		<b><i>Moderately Happy</i></b>	
Happiness towards School	614	4.90	1.13791
		<b><i>Moderately Happy</i></b>	

School is worth Recommending	614	5.18 <b><i>Moderately Happy</i></b>	1.03420
Will Stay Next School Year	614	4.75 <b><i>Moderately Happy</i></b>	1.53660
Total	614		

The table above shows the result of the descriptive statistics applied on the following variables: (1) Nerian Happiness; (2) Happiness towards Teachers; (3) Happiness towards School; (4) School is worth recommending and (5) Will Stay Next School Year. The simple random sampling method was applied by providing a google link among the respondents from Grade 6 to Grade 12. The number of respondents shows that (1) Grade 6 has 10 participants, (2) Grade 7 has 92, (3) Grade 8 has 35 respondents, (4) Grade 9 has 144, (5) Grade 10 has 142, (6) Grade 11 has 78 and (7) Grade 12 has 113. One of the limitations found in the study is the number of respondents in the Grade 6 and Grade 8. It was found disadvantageous and non – generalizing for the grade level since the number of participants did not reach 30% to 40% of the total grade level.

The parameters used in the study ((1) Nerian Happiness; (2) Happiness towards Teachers; (3) Happiness towards School; (4) School is worth recommending and (5) Will Stay Next School Year) has congruence with the study of Dolan in 2014 wherein he traced the value of happiness from the environment that influenced a particular individual. With an objective to determine the value of happiness among Nerian Students in our school community, it used Happiness as an independent criterion and assumed that it influence the environment of the student.

Table 1 presents that the value of Nerian Happiness is 5.15. On a 6 scale survey, 5.15 means Moderately Happy. The definition of the parameter relates similarly to the evaluation of student experience that became associated with satisfaction, differing perceptions and unique interpretation of experience (Dolan, 2014). With a standard deviation of 1.02, the data can be seen as somewhat scattered. Datu & Lizada (2018) explained that student happiness predicts students behavioral and emotional management. Student's happiness can be predict his / her own degree of association among school activities and academics – related challenges. In the context of SFNCS, with respect to the student respondents, the mean of 5.15 can be explained if we will look

to engagement of the students among social, civic and co & extracurricular activities provided by the school.

On the four dependent variables used in the study, it can be seen that the students perceived that the school is “worth recommending”; and it got the highest average of all the moderately happy criterion. Noticeably, the standard deviation of “school is worth recommending” is only 1.03. On Recommending a school, (Aguado et al., 2015), the value of institutional reputation is always considered. While, parental choice only matters by around 26% to 32%; the pertinence of self –choice and peer influence combined is 45% to 67%. The result addresses the need for improving the opportunities for student expression in terms of academic activities, social recreations and civic productivity. (Lumontod, 2019).

Students happiness towards teachers is the most consistent of all the four independent variables. With a mean of 5.07, it has a less than 1.0 standard deviation that describes its data as less scattered. Happiness towards teachers, as described by (Lumontod, 2018), is the overall satisfaction on the emotional attachment of the student towards the teacher. Happiness towards teachers may be difficult to define, as to its scope, but on the researches of Datu & Lizada (2018) among 262 Filipino Students and Lumontod (2019) they found in particular that objectivity, resourcefulness and “student – centeredness” constitutes the happiness of the students towards their teachers.

Student’s happiness towards school has the second to the most scattered score. With a standard deviation of 1.13 and a mean of 4.90, the student has a rather scattered view of school happiness in a moderate degree. Can (2019) and Mallari, Ebreo, & Pelayo, (2015) explained that happiness towards school is influenced by School management with a 94% extent, learning environment on an 87.2% and Collaboration, with an 82.8%. School happiness, when the three mentioned criteria was met will be around 93 – 94%.

The least factor on the category “moderate happiness” is “Will Stay on the School Next School Year”. It has a 4.75 mean and a scattered, dispersed and inconsistent responses thru the standard deviation of 1.54. On the same study of Can (2019), his criterion revealed that when learning environment and teaching field was met (teaching field refers to the appropriateness of the teacher with his major, training and academic

preparations), it contributes significantly to student happiness in the school. It also recommend that school administrators should consider collaboration evidently across grade levels; lastly, it commended the actions of the tested school on relating high enrollees by improving classroom environment through enhanced curricular activities and collaborative student based extra – curricular activities.

### Test of Significant Difference

#### Are boys happier than girls? Vice versa?

Sex	Level of Happiness	Test of Significant Difference		
		F	Significance	Decision
Male (255)	5.28	0.006	0.938	Not Significant
Female (359)	5.27			

*Computed  $\alpha$  (0.938) is greater than the Critical  $\alpha$  (0.05).*

**No, neither boys nor the girls can be seen as happier or happiest.** The computed alpha of 0.938 is greater than the critical value of 0.05. Thus, it can be deduced that there is no significant difference between sexes and their level of happiness towards the school. The parameter failed to reject the null hypothesis.

Since both level of happiness falls under moderately happiness, (Male = 5.28 and Female 5.27), both can be considered moderately happy among the factors tested on the study. The result of the analysis above confirms that the associated factors influencing student happiness caters similarly and not discriminating the gender potentials of the students. The same result was revealed by Talebzadeh & Samkan, (2011) and Zarnaghash et.al (2015) wherein they emphasized the role of school administrators, planning officers and student activities head (coordinator) in providing gender inclusive activities. The impact of the gender inclusive in the classroom can be seen on a productive school enrollees. It radiates hope to every individual for their inclusivity matters despite individual differences (Donnelly et al., n.d.).

#### Does Grade Level influence student happiness?

**Yes, grade level influences the value of student happiness.** From the results above, it can be gleaned that Grade 7, with almost 92 respondents, got the highest mean



for happiness with almost 5.82 or Very Happy. Grade 12 Students has the lowest level of happiness in the moderately happy category.

Grade Level	Level of Happiness	Test of Significant Difference		
		F	Significance	Decision
Grade 6 (10)	4.8000	11.76	0.000	Significant
Grade 7 (92)	5.8261			
Grade 8 (35)	5.3429			
Grade 9 (144)	5.4444			
Grade 10 (142)	5.1831			
Grade 11 (78)	5.3205			
Grade 12 (113)	4.7345			

*Computed  $\alpha$  (0.000) is lesser than the Critical  $\alpha$  (0.05).*

Since the computed value of alpha is 0.000 and is lesser than the critical value of 0.05, it can be deduced that there is a significant difference on the value of happiness per grade level.

According to Dolan (2014) the value of happiness among students change as they progress on the academic ladder. In his book, he defined the concept of “many focus, one experience and one focus, many experience”. Accordingly student failed to appreciate the value of happiness if they are having multiple focus yet leads only to same experience. Students tend to experience distinction bias, wherein they look on differences among focus / activities and tend feel disappointed if they realize the third is easier than the first; or the last is better and “I should have focus more on it”. On the other hand, if the focus is only one, say for example they will do a musical play and connect the skills and concepts of the play in English, Music, Arts and Social Sciences, opportunities for experience is abundant and their initiative will be robust. In the result of the statistics above, it shows that the students has significantly different levels of happiness that stretches from moderately happy to very happy.

## Test of Significant Association

### What satisfies Nerian Happiness?

			PARAMETERS / ELEMENTS OF HAPPINESS				
			Nerian_Happiness	Teacher_Happiness	School_Happy_Place	School_Worth_Recommending	Decided_for_Next_School_Year
PARAMETERS / ELEMENTS OF HAPPINESS	Nerian_Happiness	Correlation Significance (2-tailed) df		.161 .000 611	-.053 .188 611	-.063 .119 611	-.212 .000 611
	Teacher_Happiness	Correlation Significance (2-tailed) df	.161 .000 611		-.067 .100 611	.071 .079 611	-.249 .000 611
	School_Happy_Place	Correlation Significance (2-tailed) df	-.053 .188 611	-.067 .100 611		.139 .001 611	-.218 .000 611
	School_Worth_Recommending	Correlation Significance (2-tailed) df	-.063 .119 611	.071 .079 611	.139 .001 611		-.242 .000 611
	Decided_for_Next_School_Year	Correlation Significance (2-tailed) df	-.212 .000 611	-.249 .000 611	-.218 .000 611	-.242 .000 611	

The table above shows how each factor influence one another. Basic rule for correlation, if the result is positive, it means it has a direct relationship (A increases, so B; A decreases, so B); if the result is negative, it shows an indirect relationship (while A is increasing, the other will continue to decrease).

**Let's get inside each part of the table.**

### Findings:

			PARAMETERS / ELEMENTS OF HAPPINESS				
			Nerian_Happiness	Teacher_Happiness	School_Happy_Place	School_Worth_Recommending	Decided_for_Next_School_Year
Nerian_Happiness	Correlation Significance (2-tailed) df			.161 .000 611	-.053 .188 611	-.063 .119 611	-.212 .000 611

- 1) There is a weak positive correlation between Nerian Happiness and Teacher Happiness.** With a correlation result of .161 (16%) and a significant value of 0.00 (which is lower than 0.05), we may deduce that the result between the two variable is significant and manifest a weak correlation. The result

means that Nerian Happiness is somewhat influenced by teacher happiness on a weak extent, that only 16% of the respondents have shown such association.

- 2) **There is a very weak negative correlation between Nerian Happiness and their perception of Happiness about the School.** The correlation value of -0.053 (-5%) suggest that an increase in the value of Nerian Happiness can contribute to a very little decrease on the perception of Happiness about the School. However, since the significant value is greater than 0.05 ( $0.188 > 0.05$ ), weak relationship can only happened by chance (nagkataon lamang).
- 3) **There is a very weak negative correlation between Nerian Happiness and the idea of recommending the School to others.** The correlation value of -0.063 (-6%) suggest that an increase in the value of Nerian Happiness can contribute to a very little decrease on the idea of recommending the School to others. However, since the significant value is greater than 0.05 ( $0.119 > 0.05$ ), weak relationship can only happened by chance (nagkataon lamang).
- 4) **There is a weak negative correlation between Nerian Happiness and the idea of staying (or continuing someone's education) in the school.** The correlation value of -0.212(-21%) suggest that an increase in the value of Nerian Happiness can contribute to a little decrease on the idea of staying (or continuing someone's education) in the school. The relationship of the variable is described as significant since the computed alpha is 0.00 and it is lower than 0.05. Since the relationship is inverse, even the students are happy on being a Nerian, still, around 21% may not consider staying in the school or may have a lower perception on deciding to continue their education in the school.

## The Key Influencers of Nerian Happiness: The Power of Power BI

On the sample presented, who are the happiest?



One of the key influences of Nerian Happiness is the Grade Level of the students. Accordingly, Very Happy Nerians came from the level Grade 9 below. Most male are “very happy” than female, whose age is lesser than or equal to 14. By considering the following

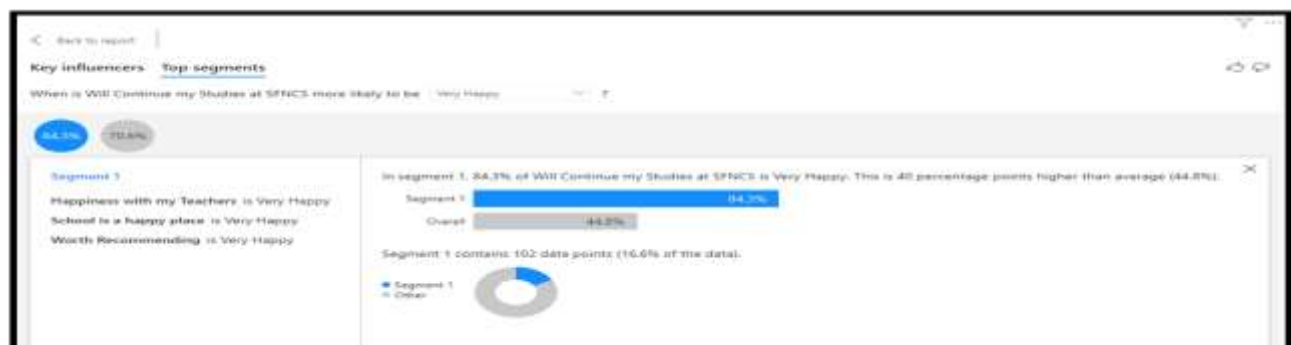
key influences, the research may recommend that the school must consider the best practices applied among these level and cater it to Grade 10 to Grade 12.

### How is the condition of other grade level, in terms of happiness?

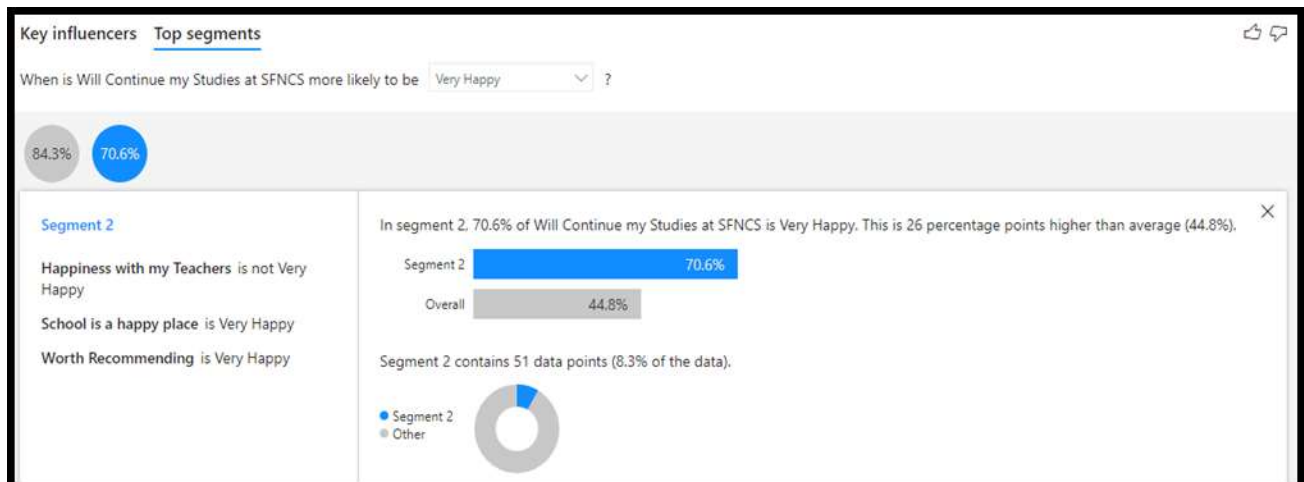


When Grade Level is more than 11, it reveals that they are “seldom happy” than any Grade Level. By looking at age, as key influencers, those whose age is 15 and above has 2.75% to be seldom happy. This coincides with the report, that some from the Grade 10 can be seldom happy about the school, if we will consider their age. Moderately happy individuals can be found at Grade 8 to Grade 10, but not among Grade 11 and Grade 12 Students. Females are more moderately happy to seldom happy, as revealed by the key influencers test under the said category.

### What will influence our students to stay?



The above figure shows that if we will meet the criteria that our students will be Very Happy with the teachers and with the school, and they will develop the idea of recommending the school to others, then it will better the school 84%, in making our students to stay and continue their education at SFNCS.



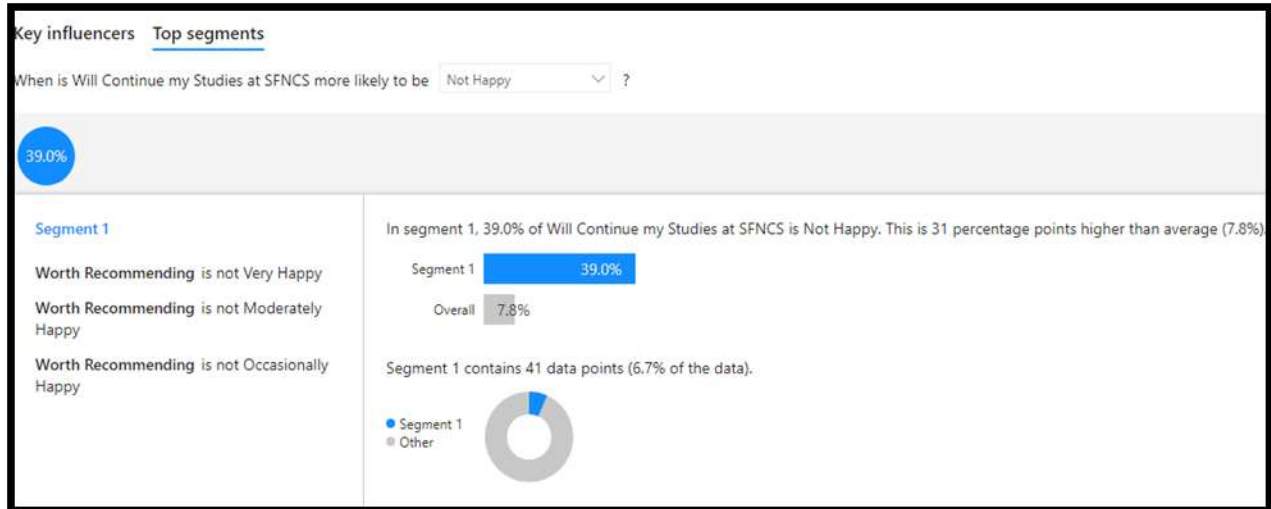
The above report shows that when students are not happy with the teachers, it will decrease the possibility of our student's continuing their education at SFNCS by around 14%. However, to maintain the statistics, the school should be viewed by our students as a happy place and they were formed by the idea of recommending our school to other non – Nerian students.

**When will most our sampled respondents leave the school, or will not continue their schooling anymore in SFNCS?**



The above figure shows if our students are no longer happy with the teacher, not happy with the school and no longer find the school as worth recommending, it will decrease the likelihood of continuing studies at SFNCS by around 27%.

Moreover, the data found that recommending the school to other Non – Nerian Students is crucial to the attitude of our students whether they will stay or not in our school, to continue their studies. The figure below will explain everything.



Based on the figure above, the single component of recommending our school to non – merian students is enough to decrease our sampled students by 39% and it is around 239 out of 614 respondents. When students no longer find the school worth recommending, it became a powerful force to decrease our school population. The above findings found convergence on the study of Dagang & Mesa (2017). Their study about School Choice revealed that School Academic Reputation has a 5 over 5 extent in the factors affecting student’s school choice. This academic reputation is the source of recommendation among non – students of the school, pertaining to. Vibrancy in campus life influences the student’s perception of the school in 0.00 significance; this includes religious affiliation and community activities that makes the school ‘well known’ in the community. Sharmin et al (2019) explained that “considering the school as a future option” is moderately affected by the school popularity. The research suggested that community based activities that engages leading stakeholder will strengthen the bonds of the school and the community; in such case, the school will not be problematic in looking for recommendations, from other people, in marketing the school.

## Conclusion

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The following are the salient findings of the study:

- There is a high view from the student's in "Recommending the school" to other people. This category got the highest mean of 5.18.
- Neither boys, nor girls can be described as "happier than the other". The responses of the respondents, when grouped according to sex, does not significantly differ with one another.
- There is a significant difference, on the other hand, on the happiness of the students when they are grouped according to their grade level.
- The value of Nerian Happiness is significantly influenced by the student's experience of Happiness with their teachers. It is also significantly influenced by the student's thoughts of studying on the school for the next school year.
- The Power BI was able to present the Key Influencers of Nerian happiness. It statistically presented the likelihood or the chance that may occur when certain conditions were not met or met, with regards to Nerian Happiness.

## Recommendations

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Based from the discussions of the data, the following actions are recommended to further improve the programs of the school with regards to Nerian Happiness:

1. The guidance and counselling department must strengthen their HNP or Holistic Nerian Program and align their activities from the results of the study. A review of its target goals and success indicators will be deemed necessary to further evaluate the extent of its implementation to the Nerian Community.
2. Faculty Development Programs must consider "retooling the advisers" program. This new program will aim to strengthen the communication and connection skills between teacher and students. It will develop a balance formation so that teachers will be "second parents" as well as "experts on their own field of specialization".
3. The Committee on School Promotions will also benefit from the results of the study. Since 2017, the committee has been on series of evaluation and review. The results of this study will help the committee in crafting novel ideas in addressing student attrition and decrease on parent – community collaboration.
4. The School Administration, after perusing the results of the study, should be consistent on establishing profound networks with parents and the community. This will help the school in sustaining its enrollment while making its academic, and social reputation to the surrounding community.

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