

Toward Customer Oriented Personality Development: A Challenge for Schools

(An Experiment with a Quality Evaluation Methodology)

Abstract

An experiment is carried out using Kano methodology of quality evaluation to identify the voices of stakeholders of schools to categorize their needs regarding personality traits of a person and identify the gaps in understanding of the required personality traits of the student they have to nurture or produce. In this study, Kano methodology which has been applied widely for products and services is used for the first time to identify the voice of customers on the personality factors. The Five Factor Personality Model is used to describe the traits of a person. Experiment results showed that most of the personality factors namely 'honesty and reserve in learning', 'thoroughness and easy taking at work', 'outgoing and friendly personality', and 'rational and creative' are found as the 'one-dimensional' or 'more-is-better' quality. And, the personality trait 'aloof' is found as the 'indifference' quality indicating that stakeholders do not care whether a person has this personality or not, whereas, the 'shy' is found as the 'reversible' quality, meaning, stakeholders do not prefer a person having this personality traits. In addition to this, it is also observed that compared to the guardians, teachers prefer the creative trait more than the rational and logical trait of a person.

Keywords:

Kano Methodology, Five Factor Personality Model, Voices of Stakeholders of Schools

Introduction

"I want my child to study hard and be an engineer in the future, but he is always happy playing cricket. The school has chosen him the captain in the forthcoming interschool competition.

"I want my child to be a successful businessman in the future. However, he is afraid of mathematics, and is instead happy writing poems and stories. His teachers always motivate him to write and publish his poems in the newspapers.

"I want my child to become a famous celebrity in the future, but he is so engrossed in his studies and home work that he never gets the time for any extra curricular activities."

We often hear these and other similar expressions from our guardians. Teachers, on the other hand advocate that a child should nurture his or her in-built personality. The teachers only facilitate the child's growth according to his or her individual disposition or traits. These discussions never end. In fact, School, as an organization, is a character building institution. The School is an institution where the children are admitted into at an early age to learn some worldly knowledge and skills which would be applicable in the future. The teachers are the main actors who have the responsibility of facilitating the children's character building. Thus, viewing from the systemic perspective, a child with a raw mindset is an input while an adolescent with a matured mindset is the output. The teachers are the processors of this character building system. The guardians, the community or the society are both the suppliers and consumers. While the teachers, guardians, community and the society at large are the major stakeholders in the schooling system, the children in the schools are merely 'raw materials' upon whom various experiments are carried out.

We all believe that the knowledge and skills of a person can be built-up within the environment of a school. There's no doubt about it. But what about the character and personality of a person? Is it possible to change them? Whether the personality or traits of a person are derived by nature or can be nurtured has been a subject of long debate. Scientists have postulated several theories related to the

fields of biology, psychology and sociology to provide rational inputs to this debate. Guardians want to change the personality of their children according to their own desire and need. Teachers, on the other hand, strive to change the personality of their students as per their desires and established norms. Is there a gap in the understanding of the personality of a child between the two actors, i.e., guardians and teachers? Can we really change the personality of a child? Who is responsible for this? Indeed, both! Some specific characteristics of individual personality can definitely be changed, and this is something both the guardians and teachers should understand and work on in a concerted manner.

Defining and understanding the personality of a person is quite difficult. One of the earliest scientific readings on personality can be found in the “Theory of Traits” propounded by Gordon Allport. He came out from the domain of psychotherapists of that time to explain the nature of a healthy human being and defined the term ‘traits’ as a personal disposition. He defined trait as “a generalized and focalized neuropsychic system (peculiar to the individual), with the capacity to render many stimuli functionally equivalent, and to initiate and guide consistent (equivalent) forms of adaptive and expressive behaviour”¹ Allport collected 17,953 terms that could describe a trait of a person. He admits that naming traits is a complex task that requires a serious approach, and identifying them is another important one. In short, traits are real and exist within the person. Traits guide the person’s behaviour and, in the process, make the behaviour consistent. However, the Allport’s Theory of Traits is not based on empirical research per se.²

There are mainly two approaches for explaining this complex term, the personality. The first one is biological. The biological-personality theorist, Hans Eysenck regards personality as being primarily an in-born phenomenon. According to him, personality is more like the colour of the eye or the height of the person rather than some learned phenomena. He has proposed a scheme with three dimensions: neurotic vs. stable, extroverted vs. introverted, and stupid vs. intelligent. Eysenck’s theory leans toward the nature end of the continuum.³ The second approach is a social learning approach which is closer to the nurture end of understanding personality. The Five Factors Model of personality propagated by McCrae and Costa consider the social learning approach together with the biological approach. This model serves as a bridge between the biological and social learning approach.

Naturally, all educational institutes believe in character building of students, not only their knowledge and skills but also their personality and traits. Hence they take the approach of social learning for nurturing the personality of students. The question then arises as to which traits of the students that the community or the society prefers the most? Again, there are two approaches to this. The first one is to follow the norms and standards that educationists have long established through numerous studies and research. The second one is to identify the traits by seeking the opinions of the key stakeholders of the schools, i.e. the guardians and the teachers. Schools having the quality mindset of serving the community as their customers, i.e., the TQM approach, would adopt the second approach. In the process of developing the students, the schools first attempt to seek the views of the stakeholders and identify what the latter appreciates as important the type of personality in their children. Then only would the schools deploy their voices in the process of character building. This way, the customers are always delighted.

In this respect, one of the major challenges for schools is to identify the preference of stakeholders regarding the traits of child they would like to see built-up the most. The second challenge is to see the differences in the perception of the guardians who send their wards to schools and the teachers who are responsible for character building of those children. The problem gets even more confounding as perceptions and preferences differ in different demographic and socio-economic environments.

This paper reports some findings of an experiment done in Biratnagar in the eastern Terai of Nepal. The experiment has been carried out with a quality evaluation methodology for identifying the preferences of the stakeholders of schools on the desired traits of students in Biratnagar.

Objective

The objective of this study is to identify the voices of stakeholders of schools on the desired traits of a person and to find out if there are any gap in the voices of guardians and teachers. Other objectives are to design a simpler quality evaluation methodology to observe a complex personality study and to develop a data base for a larger national study.

Hypothesis

This study looks at the following two hypotheses:

1. Various personality traits of students demanded by stakeholders will bear different need levels.
2. There exist gaps in the need of personality traits of students among the customers (guardians) and the processors (teachers).

Research Methodology

The Five Factor (OCEAN) Model of McCrae and Costa is used to describe the traits of a person. Kano's two-dimensional quality evaluation method is used to identify the voices of stakeholders. One industrial city of the Nepal is chosen for the experiment. A survey instrument is developed on the basis of Kano's method and primary data collected from teachers and guardians of the students at randomly selected schools in the city of Biratnagar. The data collected are then analyzed to identify the need levels of different personality factors or dimensions of students as opined by teachers and guardians. Comparisons are made and gap identified in the needs.

The Five Factor (OCEAN) Model of Personality

A personality trait is a temporally stable, cross-situational individual difference. Currently the most popular approach among psychologists for studying personality traits is the five-factor model or Big Five dimensions of personality. The five factors were derived from factor analyses of a large number of self as well as peer reports on personality-relevant adjectives and questionnaire items. The OCEAN⁴ Model enlists five factors – Openness, Conscientiousness, Extroversion, Agreeableness and Neuroticism(r*).

The following are some of the important characteristics of the five factors. First, the factors are dimensions, not types, and therefore, there is big variation among the people with most falling in between the extremes. Second, the factors are stable over a 45-year period beginning in young adulthood. Third, the factors and their specific facets are heritable (i.e., genetic), at least in part. Fourth, the factors probably had adaptive value in a prehistoric environment. Fifth, the factors are considered universal, having been recovered in languages as diverse as German and Chinese. Sixth, knowing one's placement on the factors is useful for insight and improvement through therapy. The two extremes of the personality as listed by the OCEAN model may be explained in terms of the following adjectives.

1. **Openness to Experience:**
Honesty in learning from others
Reserve in learning from others and self-learning
2. **Conscientiousness:**
Thoroughness at work every time
Easy taking at work every time
3. **Extrovert:**
Outgoing and talkative person
Shy person not aggressive
4. **Agreeableness:**

* Reverse side of neuroticism

- Friendliness
- Aloofness
- 5. **Neuroticism (R):**
 - Rational and logical
 - Irrational but creative

Kano's Two Dimensional Quality Evaluation Methods

The Kano methodology advocated by Prof. Noriaki Kano is one of the popular methods to categorize the quality needs of the customers. The theory states that blindly fulfilling customer requirements has to bear risks associated with it, if the product/service provider is not fully aware of different categories of quality that customers demand. In his two-dimensional model of quality, he has categorized four types of quality as perceived by customers. The two-dimensional model is shown in Figure 1.⁵

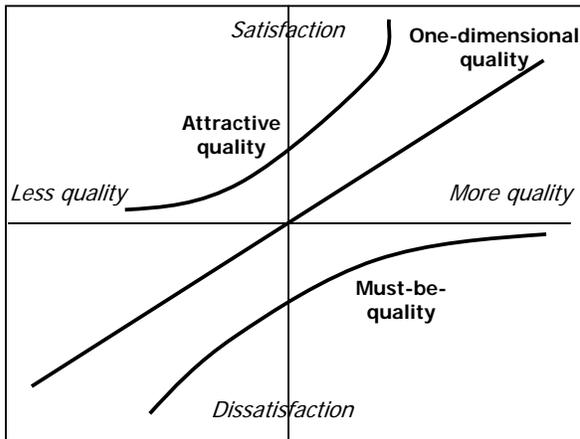


Figure 1: Two-dimensional Quality Model of Kano

One-dimensional quality (O) category contains those attributes which when increased customers will be more and more satisfied. There is linear relationship between the quality level and satisfaction level. This category can also be called the More-the-better quality.

Must-be-quality (M) category contains those attributes which must be present in the products or services, otherwise, customers would start complaining. However, after some extent, even if we increase the quality level of the attributes, customers will not express their satisfaction as in one-dimensional category. This category is also called the Necessary quality.

Attractive Quality (A) category contains those attributes which when increased, excites the customers. These attributes are generally hidden, and caters to the latent need of customers. Customers would not complain about the lack of these attributes, but when served with these attributes, they excite the customers. These are useful to create “WOW” effect. This is also called the Exciting quality.

Another category called the **Indifference quality (I)** includes those attributes for which the customers do not care even if included in the product or service. This means the absence or presence of these attributes in the product/service is immaterial to the customers.

The Kano methodology is used to identify and cluster quality attributes in the above mentioned categories through customer survey. Kano suggests that the process should be designed as per the customer need and institutional capability. These categories are placed in a hierarchical order in terms of importance as **I < M < O < A**

Research design

Ten quality attributes (2 extremes each of the 5 dimensions of OCEAN model) are considered for need survey in this study. The respondents among the stakeholders of schools are stratified in two groups namely the school teachers and guardians of students. The study was conducted in Biratnagar, an industrial city situated about 500 km south-east of Kathmandu, the capital city of Nepal. (There may be some degree of cultural and value-based biasness that emerge from respondents in different environments. The results of this study may be compared with other environments in the future.)

TRINITY	ORGANIZATION	INTERNATIONAL
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Kano's model questionnaire was used to collect the 'feelings' of respondents. The functional and dysfunctional questions for all 10 personality quality attributes were asked to rate the feelings. Four rated answers included were (i) I like this type of person very much, (ii) I expect that all people will be of this type, (iii) I can tolerate this type of person, and (iv) I dislike this type of person⁶.

		1. Like	2. Expect	3. Tolerate	4. Dislike
FUNCTIONAL	1. Like	Q	A	A	O
	2. Expect	R	I	I	M
	3. Tolerate	R	I	I	M
	4. Dislike	R	R	R	Q

Four schools, three public and one private, were selected for the survey. The questionnaires were administered to teachers and guardians of schools with the assistance of the principals of the respective schools. Altogether 40 questionnaires were handed over to each principal. Each principal was requested to ask 10 male and 10 female teachers to gather in a classroom during a lunch break and fill-up the questionnaires. Likewise, each principal was requested to call 20 students of class 9 and class 10 and, through them, have their respective guardians fill up the questionnaires at home. The survey was carried out in one week in October 2004. Altogether, 87.5%, i.e., 140 respondents (74 teachers and 66 guardians) returned the questionnaires out of 160 (80 each for two groups) distributed.

Kano's quality evaluation table was utilized to categorize different quality attributes in the analysis of the data collected through the survey. (Refer Table 1 for categorization reference table). Next, radar charts were made to identify the differences in the extremes of all five dimensions from the feeling survey. Then, to compare the need level of all five factors within a common platform, a weightage method was used. The weightage given in geometric progression are as follows:

- (Q) Questionable quality: 0 point
- (R) Reversible - 4 point
- (I) Indifference quality: 1 point
- (M) Must-be-quality: 2 points
- (O) One dimensional quality: 4 points
- (A) Attractive quality: 8 points

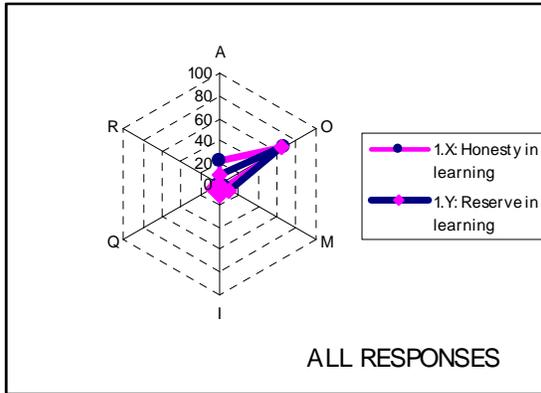
Lastly, a five-factor personality need chart is prepared to identify the preferences of guardians and teachers in each personality trait of a person.

Results and Discussion

The Quality Evaluation Table (refer, Table 2) is computed after compilation of data obtained from the survey of five-factor model of personality that reflects the voices of student's guardians and school teachers. The table shows the responses of guardians and teachers categorized as quality need level of two extremes of five factors of personality traits namely Attractive (A), One-dimensional (O), Must be quality (M), Indifference (I), Reversible (R), and Questionable (Q). Additionally, the scores of all dimensions of five factors are given in a weighted common platform as addressed by both groups of respondents.

The evaluation table shows that both respondent groups consider most of the factors of personality as one-dimensional quality. This indicates that most people prefer that a person has more of the different traits; the more the better. The exception to this are the 3rd and 4th factors, i.e., the personality factor "Shy" falls under the reversible or questionable quality level and the personality factor "Aloof" falls under indifference quality level.

Individual radar charts depicting overall responses on all five dimensions of personality are drawn to identify various characteristics of responses.



The first factor, **Openness to experience**, with two extremes like *honesty in learning* (1.X) and *reserve in learning* (1.Y) in the six axis radar chart exhibits similar trend in both extremes with maximum responses in the ‘one-dimensional’ quality level and little response in ‘attractive’ level for *honesty in learning*.

The second factor, **Conscientiousness**, with two extremes like *thoroughness in work* (2.X) and *easy taking in work* (2.Y) in the radar chart shows similar trend in both extremes with maximum responses in the ‘one-dimensional’ quality level and little response in ‘attractive’ level for both.

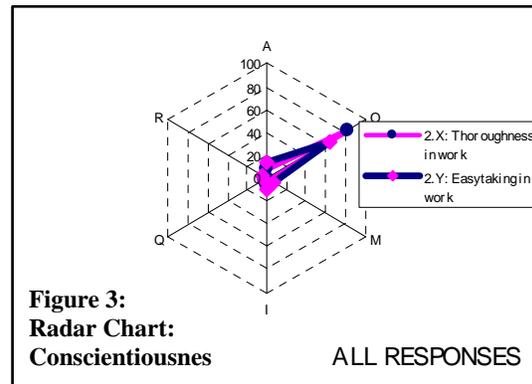


Figure 3:
Radar Chart:
Conscientiousness

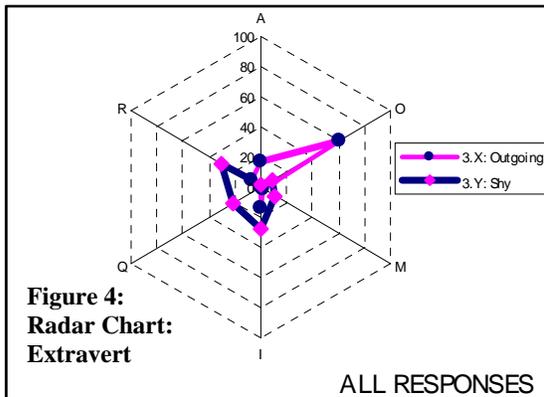


Figure 4:
Radar Chart:
Extravert

The third factor, **Extravert**, with extremes like *outgoing every time* (3.X) and *shy every time* (3.Y) in the radar chart shows that both extremes do not exhibit similar trends. The *outgoing* factor shows maximum responses as ‘one-dimensional’ with second response in ‘attractive’. It is quite interesting to note that another extreme, the *shy* factor, shows responses in ‘questionable’, ‘reversible’ and ‘indifference’ levels.

The fourth factor, that is, **Agreeableness**, with two extremes like *friendliness* (4.X) and *aloofness* (4.Y) in the six axis radar chart show that both extremes exhibit similar trend. The *friendliness* factor shows maximum responses in the ‘one-dimensional’ with second response as *attractive*, whereas another extreme, *aloofness* factor shows maximum responses in ‘indifference level’ and second response in ‘reversible’. This is also quite interesting to note.

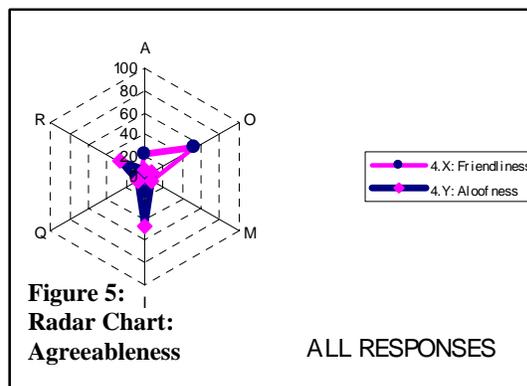


Figure 5:
Radar Chart:
Agreeableness

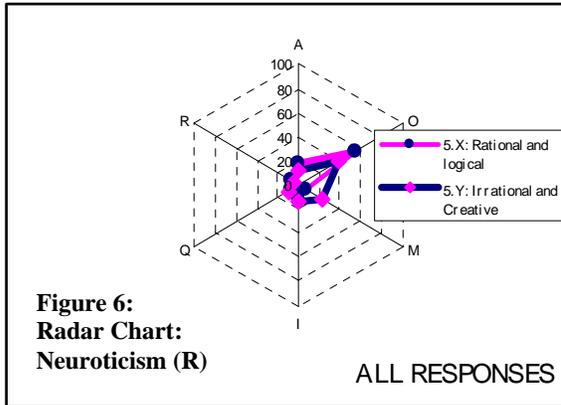


Figure 6:
Radar Chart:
Neuroticism (R)

The fifth factor, that is, **Neuroticism (r)** with two extremes like *rational and logical* (5.X) and *irrational but creative* (5.Y) in the radar chart shows that both extremes having similar trends with maximum responses in the ‘one-dimensional’ quality level with few response in ‘attractive level’ for *rational* factor as well as ‘must be quality’ for *creative* one.

The five radar charts thus show the quality levels of two extremes of five factors of personality that the guardians and teachers expect to develop in their wards and students respectively.

The Quality Evaluation Table also depicts the score obtained for both extremes of each personality factor expressed in the OCEAN model by the guardians and teachers. The scores are calculated based on the weightage provided for different responses. This compares the responses of both groups in a common platform. A 5-Factor Personality Need Chart (Figure 4) is developed on the basis of the scores thus obtained. The chart shows the comparative voices of guardians and teachers on the preference of each five-factor personality of a person.

The Quality Evaluation Table also depicts the



Figure 7: Five-Factor Personality Need Chart
Comparative Voices of Guardians and Teachers

Openness to experience

The opinion of guardians exhibited the personality factor score ranging from 0.56 in *honesty in learning* to 0.47 in *reserve in learning*, whereas, the opinion of teachers exhibited the personality score ranging from 0.61 in *honesty in learning* to 0.70 in *reserve for learning*. The teachers expressed wider range between extremes than the guardians in this personality factor of Openness to Experience.

Conscientiousness

The opinion of guardians exhibited the personality factor score ranging from 0.48 in *thoroughness at work* to 0.43 in *easy taking at work*, whereas, the opinion of teachers showed that a person may have the personality score ranging from 0.84 in *thoroughness at work* to

0.63 in *easy taking at work*. The teachers expressed wider range between extremes than guardians in this personality factor of Conscientiousness.

Extrovert

Likewise, the opinion of guardians showed the personality factor score ranging from 0.43 in *outgoing* personality to minus 0.01 in *shy* personality, whereas, the teachers’ opinion showed the personality score ranging from 0.71 in *outgoing* personality to 0.05 in *shy* personality. Both guardians and teachers have opined that they do not like a person having *shy* personality. Here too, in the personality factor of Conscientiousness, the teachers exhibited a wider range in *outgoing* personality compared to the guardians.

Agreeableness

The opinion of guardians showed a personality factor score ranging from 0.51 in *friendly* personality to 0.07 in *aloof* personality, whereas, the opinion of teachers exhibited the personality score ranging from 0.58 in *friendly* personality to 0.21 in *shy* personality. Both guardians and teachers have opined that they do not like a person having *shy* personality. In this personality factor of Agreeableness too, the teachers expressed wider range in *outgoing* personality than guardians.

Neuroticism [R]

Finally, in the personality factor of Neuroticism, the opinion of guardians showed that a person may have the personality factor score ranging from 0.47 in *rational and logical* traits to 0.36 in *irrational but creative* traits, whereas the opinion of teachers exhibited a personality score ranging from 0.36 in *rational and logical* traits to 0.50 in *irrational but creative*. The opinions of both teachers and guardians exhibited almost the same range between extremes in this personality factor of Neuroticism (r). Here, a point to be noted is that guardians' score on the *rational and logical* personality is more than that of the teachers, whereas, the teachers' score on the *irrational but creative* personality is more than that of guardians.

Conclusion

Based on the two hypotheses set at the time of study, the following impressions were observed.

1. The two groups of stakeholders – guardians and teachers expressed different need levels for the five factors of personality.
 - a. Most of the personality factors namely *honesty and reserve in learning, thoroughness and easy taking at work, outgoing and friendly personality, rational and creative* traits are found to be at 'one-dimensional' quality level. That means all these factors are expressed as more-is-better quality of a person.
 - b. The *aloof* personality is found to be an 'indifference' quality level indicating that stakeholders do not care whether a person has this personality or not.
 - c. The *shy* personality is found to be a 'reversible' quality level, meaning, stakeholders do not prefer a person having these particular personality traits.
2. The teachers in general have wider range of scores than the guardians in the two extremes of most of the personality factors except in the *rational and logical* personality. Compared to the guardians, teachers prefer the *creative* trait more than the *rational and logical* trait.

This study needs further experimentation in other parts of the country with different socio-cultural settings to develop better understanding of the subject. Schools need to address the findings of such a study to develop extra-curricular activities that would help develop the personalities which the society demands the most.

**Table 2: QUALITY EVALUATION TABLE
FIVE FACTOR (OCEAN) MODEL OF PERSONALITY
VOICES OF GUARDIANS AND TEACHERS**

PERSONALITY FACTORS	Guardians (%)							Teachers (%)							All Responses (%)						
	A	O	M	I	R	Q	SC.	A	O	M	I	R	Q	SC.	A	O	M	I	R	Q	SC.
I. OPENNESS TO EXPERIENCE																					
1.X: Honesty in learning	18.2	75.8	1.5	1.5	1.5	1.5	0.56	24.3	58.1	8.1	5.4	0.0	4.1	0.61	21.4	66.4	5.0	3.6	1.0	3.0	0.56
1.Y: Reserve in learning	12.1	65.2	4.5	12.1	0.0	6.1	0.47	6.8	62.2	14.9	10.8	0.0	5.4	0.70	9.3	63.6	10.0	11.4	0.0	6.0	0.45
II. CONSCIENTIOUSNESS																					
2.X: Thoroughness at work	6.1	80.3	6.1	6.1	0.0	1.5	0.48	8.1	83.8	0.0	5.4	0.0	2.7	0.84	7.1	82.1	2.9	5.7	0.0	2.0	0.50
2.Y: Easy taking at work	6.1	69.7	9.1	10.6	3.0	1.5	0.43	20.3	58.1	5.4	10.8	4.1	1.4	0.63	13.6	63.6	7.1	10.7	4.0	1.0	0.46
III. EXTROVERT																					
3.X: Outgoing	21.2	51.5	1.5	13.6	12.1	0.0	0.43	12.2	67.6	1.4	13.5	4.1	1.4	0.71	16.4	60.0	1.4	13.6	8.0	1.0	0.44
3.Y: Shy	3.0	12.1	12.1	27.3	33.3	12.1	-0.01	1.4	5.4	9.5	27.0	27.0	29.7	0.05	2.1	8.6	10.7	27.1	30.0	21.0	-0.03
IV. AGREEABLENESS																					
4.X: Friendly	24.2	54.5	7.6	4.5	6.1	3.0	0.51	18.9	50.0	6.8	21.6	1.4	1.4	0.58	21.4	52.1	7.1	13.6	4.0	2.0	0.49
4.Y: Aloof	9.1	6.1	10.6	40.9	25.8	7.6	0.07	2.7	5.4	5.4	50.0	29.7	6.8	0.21	5.7	5.7	7.9	45.7	28.0	7.0	0.02
V. NEUROTICISM (R)																					
5.X: Rational and logical	21.2	56.1	1.5	7.6	7.6	6.1	0.47	14.9	52.7	10.8	10.8	4.1	6.8	0.58	17.9	54.3	6.4	9.3	6.0	6.0	0.45
5.Y: Irrational but creative	12.1	40.9	22.7	7.6	6.1	10.6	0.36	12.2	39.2	18.9	18.9	2.7	8.1	0.50	12.1	40.0	20.7	13.6	4.0	9.0	0.37
PERSONALITY FACTORS	A	O	M	I	Q	R	sc.	A	O	M	I	Q	R	sc.	A	O	M	I	Q	R	sc.
	Guardians (%)							Teachers (%)							All Responses (%)						

End Notes

- ¹ Allport, G.W. (1937) "*Personality – A Psychological Interpretation*" Henry Holt and Company, New York
- ² A detail review of the F.H. Allport and G.W. Alport's 1921 and G.W. Alport's 1937 study on personality is made critically by Louise Barkhuus of Concordia Univeristy, Patricia Csank "*Alport's Theory of Traits – A Critical Review of the theory and Two Studies*", 1999
- ³ Eysenck, H.J. (1967) "*The Biological Basis of Personality*" Springfield, IL: Thomas
- ⁴ McCrae, R. R., & Costa, P. T., Jr. (1996) Toward a new generation of personality theories: Theoretical contexts for the five-factor model. In J. S. Wiggins (Ed.), *The five-factor model of personality: Theoretical perspectives* (pp. 51-87). New York: Guilford.
- ⁵ The model underlying Kano's theory has its roots in social psychology and Motivation-Hyzine (M-H) theory developed in 1959 by Fredrick Herzberg for employees job satisfaction. Kano first presented a paper "On M-H Property of Quality" Nippon QC Gakka, 9th Annual Meeting published Abstracts, 1979 before presenting his revolutionary paper together with some colleagues on "Attractive Quality and Must-be-quality" in Nippon QC Gakka, 12th Annual meeting 1982. The summary of this research was published in 1984.
- ⁶ The questionnaire was pre-tested with five teachers and five guardians in one school and updated after getting feed back. It was found that it takes about 5 minutes to fill up a questionnaire. It was considered as a feeling survey rather than opinion survey