



Multiple Intelligence of Faculty and Selected Students in the College of Science: Input to Faculty and Student Development Programs

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Abstract

This research aimed to determine the multiple intelligences of the faculty and students in the College of Science to design faculty and students development programs which will help the university to promote quality education, to provide relevant and responsive education in accordance to the different intelligences of its clientele. The result of this study would serve as basis for the development of teaching techniques and strategies. The study used the descriptive method of research, specifically, descriptive- survey, an approach that signifies the gathering of data regarding the present condition since it tried to determine the multiple intelligences of faculty and students at the time of the conduct of the study. Specifically, this study asked for the profile of the respondents such sex, age, course and year level from the students while sex, age, and length of service from the faculty and multiple intelligences of the respondents. The findings revealed that, out of 27 faculty and 108 students, 7 and 19 are interpersonal intelligent, 6 and 9 are verbal linguistic intelligent, 4 and 28 have intrapersonal intelligence, 3 and 7 are bodily-kinaesthetic intelligent, 3 and 5 have musical intelligence, 2 and 15 are visual-spatial intelligent and 1 and 25 are logico-mathematical intelligent faculty and students respectively. From the result obtained, it is therefore concluded that there are more female faculty in the College of Science who served the university for more than 20 years. There are more female faculty and students. Faculty have interpersonal intelligence while students are intrapersonal intelligent.

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The result of this endeavour really proves that faculty have developed their social relationship for so many years of teaching while students are still working on to establish interrelationship with other individuals because of their younger age compare to the faculty. The fact that men are born with different intelligences especially that of the students, different programs, activities and strategies maybe developed to suit their intelligences as well as for the faculty.

Keywords: bodily-kinaesthetic intelligence; interpersonal intelligence; intrapersonal intelligence; logico-mathematical intelligence; multiple intelligences; musical intelligence; verbal linguistic intelligence; visual-spatial intelligence.

1. Introduction

The inner workings of intelligence, intellect, and rational have been contemplated since the beginning of thought. As knowledge is the greatest gift human kind possesses, it is imperative to our survival to know the factors of intelligence and perhaps more importantly, how to cultivate the power of these factors.

It is a fact that individuals are different from each other. The old concepts equate individual differences with intelligence and achievement and others. Whatever can be measured in the total personality is the emphasis of individual differences. Individuals vary in physical as well as in psychological characteristics.

Our schools today and culture focus most of their attention on linguistic and logical-mathematical intelligence. We esteem the highly articulate or logical people of our culture. He also says that we should also place equal attention on individuals who show gifts in other intelligences [1].

At present, the theory of multiple intelligences has grabbed the attention of many educators around the country, and hundreds of schools are currently using its philosophy to redesign the way it educates children. But, the fact is, there are still schools that teach in the same old dull way, through dry lectures, and boring worksheets and textbooks.

If the teacher is having difficulty reaching a student in the more traditional linguistic or logical ways of instruction, the theory of multiple intelligences suggests several ways in which the material might be presented to facilitate effective learning. It is therefore the aim of this endeavor to give information to teachers and others who work with the students to provide them opportunity to learn in ways harmonious with their unique intelligences. This study will also have strong implications for adult learning and development which will make optimal use of their most highly developed intelligences.

It is suggested that the concept of this study to look into the possibilities of integrating different techniques in teaching. Individuals learn in different ways and that we can use different learning styles and different kinds of intelligence to help students achieve their greatest potential. Therefore, gaining an understanding of multiple intelligences assists students also in gaining an understanding of others personally, interpersonally, professionally, and culturally.

It is hoped that faculty and students have the potential to develop and use different intelligences in the course of their lives.

Individual uniqueness overshadows the impact of any possible gender differences. Students' natural interests, skills and aspiration are likely to exert a far greater influence on the academic achievement than will their gender [2].

Education in all of the art forms benefits children by increasing their cognitive skills. It looks at how, when children engage in the arts, they are able to access and incorporate many different learning styles and intelligence factors that enhance not only their learning within the arts themselves, but also generally improve their verbal and written skills. It examines the concept of multiple intelligences, in general, as well as applying it specifically to the incorporation of arts education, and suggests a possible application of how teaching through the arts is a way of supporting a multiple intelligence approach. Overall, it argues that a multiple intelligence approach, especially one incorporates the arts, helps students to learn [3].

Human beings have different kinds of intelligence that reflect different ways of interacting with the world. It also claimed that people have numerous unrelated forms of intelligence and pointed out that people can be good in one type of intelligence but not in other [4]. Furthermore, individuals vary in both biological and psychological traits can be attributed to many influences – biological, environmental, cultural, social and an interrelation of all these factors. Several attempts to meet individual differences have been devised [5].

In addition, the paper on Self-efficacy and Multiple Intelligences stated that "If one translates theory into actuality, then one could easily envisage how a student with an intelligence such as intrapersonal intelligence or another less recognized form of intelligence, would have a low sense of self-worth and hence a low level of self-efficacy, with the concomitant low achievement prospects. As Gardner has intimated in the above quotation, the opposite process occurs in a situation where various intelligences are recognized and formally accepted in the teaching and classroom environment. The sixth grade student who feels that his to her specific form of intellect is accepted and validated will have a greater sense of self-worth and most probably higher levels of self-efficacy and higher achievement outcomes.

"The scenario sketched above is of course somewhat simplistic and there are many other elements to consider in ascertaining the relevance and functioning of self-efficacy. However, in theory and in practice, the relationship between multiple intelligence and self-efficacy can be seen as a greater acceptance of the talents, intellectual predilections and intelligence of an individual who would have possibly felt marginalized in the past " [6]

According to Multiple Intelligence Theory, schools should employ various approaches to observe students' problem-solving skills and accomplishments long-term. They should also assess the students' current level from different angles.[7]

1.1 Statement of the Problem

Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:
 - 1.1 teacher-respondents
 - 1.1.1 sex;
 - 1.1.2 age; and
 - 1.1.3 length of service?
 - 1.2 student-respondents
 - 1.2.1 sex;
 - 1.2.2 age;
 - 1.2.3 course; and
 - 1.2.4 year level?
2. What are the multiple intelligences of the respondents with respect to:
 - 2.1 linguistic/verbal;
 - 2.2 logical/mathematical;
 - 2.3 spatial/visual;
 - 2.4 bodily kinesthetic;
 - 2.5 music;
 - 2.6 interpersonal; and
 - 2.7 intrapersonal intelligences?

1.2 Objectives of the Study

This undertaking aimed to:

1. Determine the multiple intelligences of faculty and students;
2. Encourage the faculty to develop instructional material which will fit the intelligences of the students;
3. Assist the faculty with various programs/activities appropriate to their line of specialization and interests; and
4. Develop/Design faculty and students development programs.

1.3 Methodology

This study used the descriptive method of research. Descriptive research describes the current state of some phenomenon at the time of the study. It also uses hypotheses to answer questions concerning current status of the subjects of the study. This research design is considered since it attempted to determine the intelligences of faculty and students at the time of the conduct of the study.[8]

The respondents were the 27 faculty in the College of Science and 108 selected students of the college.

The Multiple Intelligence Index was used as the main instrument to determine the multiple intelligences of the respondents[9]. It consists of two parts. First part deals on the teachers' profile such as sex, age, and length of service and students' profile with their sex, age, course and year level. Second part composes of 35 statements. The respondents were asked to give their numerical score for every item using the scoring below:

Score	Verbal Interpretation
4	Always
3	Frequently
2	Sometimes
1	Seldom
0	Never

The respondents were asked to add all the scores for every item specified at the bottom of the second page of the questionnaire-checklist. The intelligence with the highest sum will show the highest multiple intelligences of the respondents.

The study applied frequency and rank distribution to determine profile of the respondents and mean to determine the extent of use of different multiple intelligence.

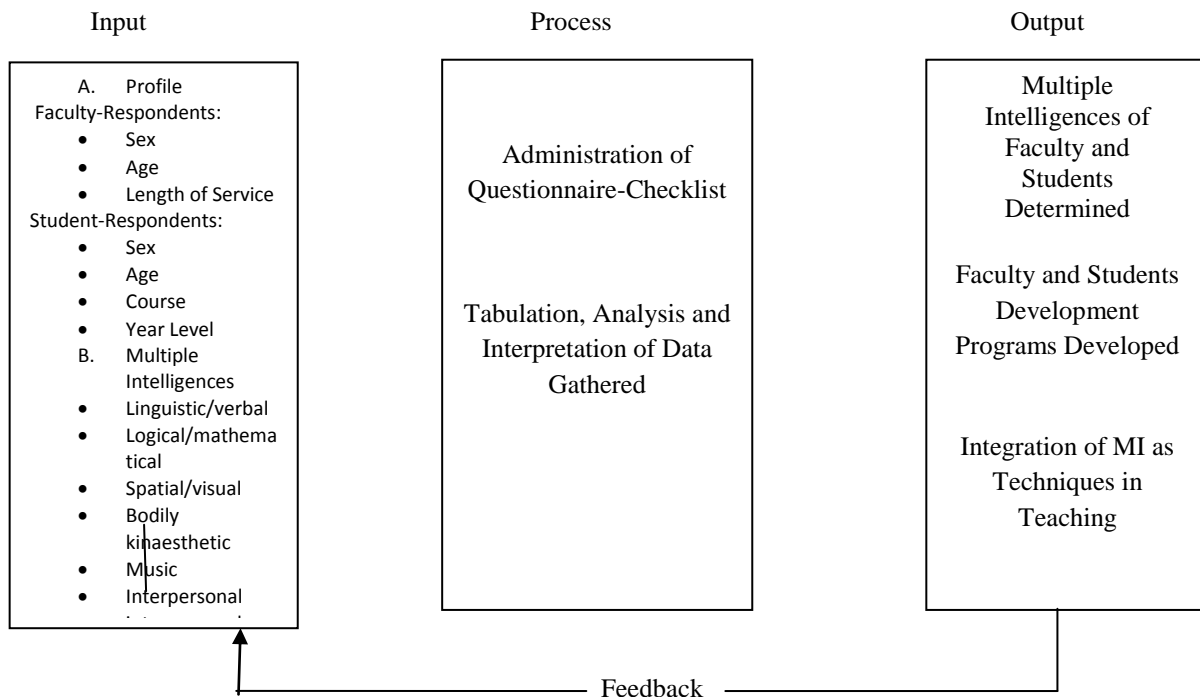
1.4 Conceptual Framework

A conceptual model has been formulated using the Input-Process-Output Model (IPO). [10] The figure is shown below.

Table 1: Frequency, Percentage and Rank Distribution of The Faculty-Respondents in terms of their Profile

Faculty-Respondents	Frequency	Percentage	Rank
Sex Male	8	29.63	2
Female	19	70.37	1
Total	27	100	
Age 55-60	4	14.81	3.5
51-54	5	18.52	1.5
46-50	5	18.52	1.5
41-44	3	11.12	5.5
35-40	4	14.81	3.5
31-34	2	7.4	6
25-30	3	11.12	5.5
21-24	1	3.7	7
Total	27	100	
Length 31 & above	1	3.8	6
Of 26-30	9	33.33	1
Service 21-25	7	26.80	2
16-20	4	14.81	3
11-15	2	7.50	5
5-10	0	0	0
Below 4	3	12.11	4
Total	27	100	

The first frame which is the input, includes the profile of the faculty such as sex, age, and length of service and students such as sex, age course and year level and the different multiple intelligences such as linguistic/verbal, logical/mathematical, spatial/visual, bodily-kinaesthetic, musical, interpersonal and intrapersonal. The second frame, the process, contains the administration of questionnaire-checklist and tabulation, analysis and interpretation of the gathered data. The last frame, the output, shows the determined multiple intelligences of faculty and students, the developed faculty and student development programs and integration of MI as technique in teaching. The feedback will be used to improve the process while the arrows serve as guide on the continuous process of the study.



2. *Result and Discussion*

The Profile of the Faculty-Respondents

Table 1 presents the frequency percentage and rank distribution of the faculty-respondents in terms of their profile.

It could be gleaned from the table that in terms of sex, out of 27 respondents, there are 19 or 70.37 percent female faculty and 8 or 29.63 male faculty respondents. It shows that there are more female teachers in the College of Science.

In terms of age, out of 27 respondents, there are 5 respondents who belong to both ages ranging from 51-54 and 46-50. There are 4 respondents in both age bracket of 55-60 and 35-40. It is followed by the age bracket of 41-44 and 25-30 with 3 respondents respectively. While the age bracket of 25-30 has 3 respondents and 1 respondent whose age belong to 21-24 age bracket.

It only means that faculty in the College of Science have stayed long in the field of teaching. It could be deduced also that they may have acquired and developed some of the intelligences and skills needed in their area of specialization.

In terms of length of service, out of 27 respondents, there are 9 or 33.33 percent faculty who serve the university for 26-30 years, 7 or 26.80 percent are teaching for 21-25 years, 4 or 14.81 percent are in the service for 16-20 years, 3 or 12.11 percent serve below 4 years, 2 or 7.5 percent for 11-15 years and 1 or 3.8 percent serve for over 31 and above respectively.

This only means that faculty really stay and serve the university for a long period of time. It could be deduced that faculty have already mastered their subject and love teaching.

Table 2 presents the frequency, percentage and rank distribution of the student-respondents in terms of sex, age, course and year level.

Table 2: Frequency, Percentage and Rank Distribution On the Profile of Student- Respondents In terms of Sex, Age Course and Year Level

Profile		Frequency	Percentage	Rank
Sex	Male	27	25	2
	Female	81	75	1
	Total	108	100	
Age	23	2	1.85	6
	22	8	7.41	5
	21	13	12.04	4
	20	19	17.59	3
	19	39	36.11	1
	18	27	25	2
	Total	108	100	
Course	BSGC	58	53.70	1
	BSPsych	50	46.30	2
	Total	108	100	
Year Level	4 th year	68	62.96	1
	3 rd year	40	30.04	2
	Total	108	100	

It could be seen from the table that in terms of sex, out of 108 respondents, 81 or 75 percent are female and 27 or 25 percent are male which means that female really outnumbered male. In terms of age, out of 108 respondents, 39 or 36.11 are in the age bracket of 19, 27 or 25 percent belong to the age bracket of 18, 19 or 17.59 belong to the age bracket 20, 13 or 12.04 are in the age bracket of 21, 8 or 7.41 belong to age bracket of 22 and 2 or 1.85 are in the age bracket of 23.

This only means that the age of student-respondents is appropriate to their year level. In terms of course, out of 108 respondents, 58 or 53.70 are enrolled in the BSGuidance and Counseling program while 50 or 46.30 are BSPsychology students. In terms of year level, out of 108 respondents, 68 or 62.96 percent are 4th year and 40 or 30.04 percent are 3rd year college students.

On the Multiple Intelligences of Faculty Respondents with respect to Different Intelligences

Table 3 shows that computed mean on the multiple intelligences of Faculty-respondents with respect to different intelligences.

Table 3: Computed Mean On the Multiple Intelligences Of Faculty-Respondents with Respect to Different Intelligences

Intelligences	Mean	Average	Frequency	Rank
Linguistic	14,12,11,5,13,14,15,11,17,14,14,13,13,11	14.75	6	2
Logical	12,18,14,15,13,15,18,14,13,13,19,16,10,10	12.64	1	7
Spatial	12,17,13,12,14,11,15,13,12,13,18,12,9,13	13.21	2	6
Bodily-kinaesthetic	11,18.12,14,11,11,17,13,12,14,17,14,16,9	13.5	3	5.5
Musical	15,9,13,7,16,11,19,5,16,12,14,11,14,17	12.78	3	5.5
Interpersonal	14,14,10,14,13,12,18,15,19,17,16,15,16,18	20	7	1
Intrapersonal	14,18,13,12,12,9.17,17,10,14,17,10,16,12	14.07	5	3
Total			27	

It is reflected on the table that with respect to intrapersonal, the mean obtained is 20, logical has a mean of 14.28, intrapersonal obtained a mean of 14.07, bodily-kinesthetic linguistic, the mean obtained is 12.64, for logical, it got a mean of 13.5, spatial has a mean of 13.2, musical obtained a mean of 12.78 and linguistic obtained a mean of 12.64.

The result shows that out of 27 faculty, 7 are interpersonal intelligent, 6 are verbal linguistic intelligent, 4 have intrapersonal intelligence, both bodily-kinesthetic and musical intelligence obtained 3 frequency from the faculty, 2 faculty are visual-spatial intelligent and 1 is logico-mathematical intelligent.

The data show that faculty-respondents really have different multiple intelligences but of different degree as reflected by the obtained means. Most of them have interpersonal intelligences which is truly proven that they have developed and established good interpersonal relationships with others because of their long stay in the field of teaching. It can be deduced also

The data show that faculty- respondents really have different multiple intelligences but of different degree as reflected by the obtained means. Most of them have interpersonal intelligences which is truly proven that they have developed and established good interpersonal relationships with others because of their long stay in the field of teaching. It can be deduced also that faculty have developed deep relationship with people. They have keen perception now of truth, beauty and reality, all elements that form foundation of true interpersonal relationship.

Table 4 presents the computed mean on the multiple intelligences of student-respondents with respect to different intelligences.

Table 4: Computed Mean on the Multiple Intelligences Of Student-Respondents with respectTo Different Intelligences

Intelligences	Mean	Ave	Frequency	Rank
Linguistic	13, 9,22,27,14,2,115,11,17,14,14,13,13,11	15.36	9	5
Logical	5,26,28,29,13,5,113,19,16,10,10	15.82	25	2
Spatial	8,13,22,28,29,1012,13,18,12,9,13	15.58	15	4
Bodily- kinaesthetic	11,22,28,33,14,111,17,13,12,14,17,14,16	14.22	7	6
Musical	37,29,20,14,6,116,11,19,5,16,12,14,11,14,	11.58	5	7
Interpersonal	19,28,32,16,11,2,14,14,13,13,11	15.73	19	3
Intrapersonal	50,33,20,6 18,13,12,12,9.17,17,10,14,17,	17.71	28	1
Total			108	

It could be gleaned from the table that with respect to the multiple intelligences of the students, intrapersonal intelligence got the mean of 17.71, next is logical with a mean of 15.82, interpersonal obtained a mean of 15.73, spatial with a mean of 15.58, linguistic , a mean of 15.36, bodily-kinesthetic with a mean of 14.22 and musical intelligence with a mean of 11.58.

The result shows that out of 108 students, 28 are intrapersonal intelligent, there are 25 students who are logico-mathematical intelligent, 19 have interpersonal intelligence, 15 are visual-spatial intelligent, 9 have verbal-linguistic intelligence, 7 have bodily-kinesthetic intelligence, and 5 students are musical intelligent.

It only suggests that most of the students have intrapersonal intelligence or they are more focused on themselves. This is maybe due to the fact that as students they need to give more attention to their studies to obtain high grades or to pass the subjects. It could be deduced also that some students find enjoyment in solitude and privacy. They have a quality of detachment that allows them to be alone without being only. Some of them also feel comfortable whether they are either with people or alone. Though, it cannot be denied that they also possess other intelligences which could be developed in time as they continue to mingle with other people and as they are exposed to different situations in their life.

3. Conclusions

In the light of the findings obtained, the following are hereby concluded.

1. There are more female faculty who serve the university for more than 20 years.
2. Female students outnumbered male students whose ages are appropriate to their year level and mostly Bachelor of Science in Guidance and Counseling students.
3. Faculty are mostly interpersonal intelligent while students have intrapersonal intelligence.

4. Recommendations

From the data obtained and the result gathered, the study recommended the following:

4. Develop instructional materials suited to the multiple intelligences of the students.
5. Use different techniques and activities in teaching to address the multiple intelligences of the students.
6. Design faculty and students development programs which will make use of the different intelligences.
7. Organize different clubs /organization which would cater the different intelligences of faculty and students.
8. Parallel studies maybe conducted in other disciplines considering other variables.

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