International Journal of Religion
2023
Volume: 4| Number 2 | pp. 244 – 253
ISSN: 2633-352X (Print) | ISSN: 2633-3538 (Online)
ijor.co.uk
DOI: https://doi.org/10.61707/btthvm59

Multiple Intelligences in The Virtual Environment of Students in The First and Second Cycles of The Six Careers of a National University

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Abstract

The general objective of the research was: To demonstrate the level of Multiple Intelligences in the virtual environment of the students of the first and second cycle of the six careers of the National University. The type of research was basic, descriptive-comparative research design: a single-variable study was carried out, and the design was non-experimental; The population and sample consisted of 391 students, located between the 1st and 2nd cycle in six Professional Schools of the National University, of which the segments are: 61% of the first cycle and 39% of the second cycle. The intelligences with the highest low level of incidence, above 35%, which is a worrying indicator, because it is more than a third of the applied population, are: linguistic, logical-mathematical, musical, kinesthetic, spatial and interpersonal. The only difference is that the intelligences: intrapersonal and naturalistic, are the ones with the lowest incidence of low level, whose percentages are below a third of the population, these being: 27.11% and 18.67%. As a conclusion, it is shown that students in the virtual environment present robustness, average abilities developed in moderate and some in process.

Keywords: *Multiple Intelligences, Virtual Environment, Multiple Intelligences, Education*

INTRODUCTION

Howard Gardner from 1983, explains in his Theory (IM) how this is presented at the cognitive level of the individual, this in turn encompasses all the skills, capacities and the virtual environment of very particular, and specific, aspects that people have, which are evidenced in a global way, these are shown in different ways, that there can be many ways of knowing, making known the peculiarities of being intelligent, each individual can show their genetics in a different way, in others very marked, in others it does not have to be demonstrated, you have to work on these intelligences that need to be stimulated, others are lost, this mystique of intelligence or that are developed in a very outstanding way in the context in which they have to live and interact with each other in a certain context and that these in turn influence the individual in a very marked way, in turn all these characteristics can be worked on and improved with the different techniques, stimuli that the individual receives; thus, reaching very optimal levels of their competence, generating and stimulating their intelligence multiple independent but connected to each other, (Hidalgo, et al. 2018).

Currently, according to Olaz (2012), Multiple Intelligences presents a broad panorama with a global view where there is not only a single intelligence or a single one in which a varied and form of possibilities is offered to identify the areas or intelligences where the individual can develop in an optimal and adequate way (Bandura, 2001). These intelligence skills enable the development of the individual in a given context as an opportunity for the learner.

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Gardner, (2001). In this sense, where the individual clearly shows his cognitive aspect, the social skills and most importantly the emotional state must be together, all of them are independent. For these authors such as Gardner (1999), Maschwitz (2001) or Pérez (2001), they understand and explain intelligence as this ability and ability to look for solutions to the different problems that arise day by day in interacting in which what is learned is modified.

METHODOLOGY

The type of research to be used is basic: Hernández (2010, p 157). The research design is descriptive-comparative: a single-variable study is conducted. The research carried out responds to a non-experimental type. Hernández (2010, p. 205) defines non-experimental research as "research that is carried out without deliberately manipulating variables. Population and sample of 391 students from six professional schools of the National University. The purpose of this research is to characterize a phenomenon or situation and indicate its most salient and differentiating features. We sought to organize and analyze, deriving significant conclusions according to the validated test (Hernández, 2010, p.200)

They were based on comparisons, contrasts. For this study, the MINDS-IM scale test tested by César Ruíz Trujillo (2004) was used. In addition, with an observation sheet to record the data and variables (Hernández 2010). The steps taken are:

Information collection, processing, systematization and data operation are based on the SPSS 22 statistical package.

RESULTS

The research was carried out at the National University in Ccoyahuacho and Santa Rosa in the Province of Andahuaylas.

At the National University, 391 students were surveyed, including 255 students in the first cycle and 166 in the 2nd cycle, as shown in Table 1 and Figure 1.

Table 1 Students surveyed at UNAJMA

Cycles of the 06 professional schools	N° of students	Percentage
1st Cycle	255	61.0
2nd Cycle	166	39.0
Total	391	100.0

Note. Students Enrolled for the 2020-I Semester

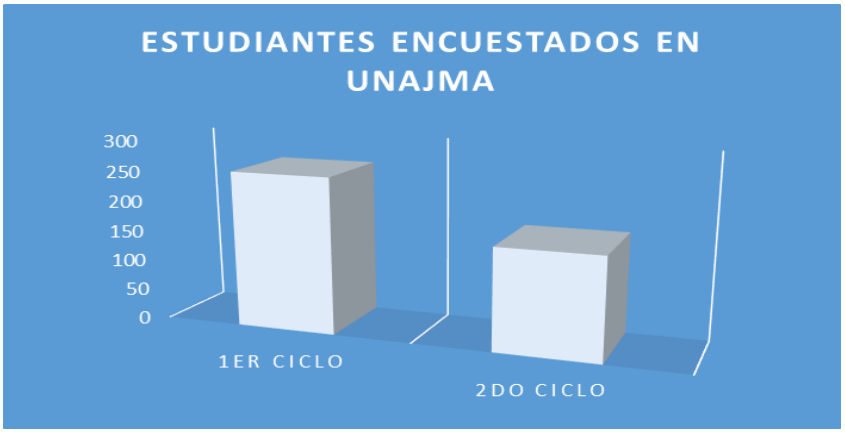

Figure 1. Percentage of students surveyed at UNAJMA (2020)

DESCRIPTIVE RESULTS

SPECIFIC OBJECTIVES

According to the Area: Verbal Linguistics of students who were surveyed (2020), at the time of the survey, it was observed that 16.37% of students had a high level, 45.27% a medium level and 38.36% a low level, as observed in Table 2 and Figure 2.

Table 2 Area: Verbal Linguistics of students who were surveyed (2020)

Level	N° of students	Percentage
High	64	16.37
Middle	177	45.27
Low	150	38.36
TOTAL	391	100.0

Note. Students surveyed in the 2020-I semester.

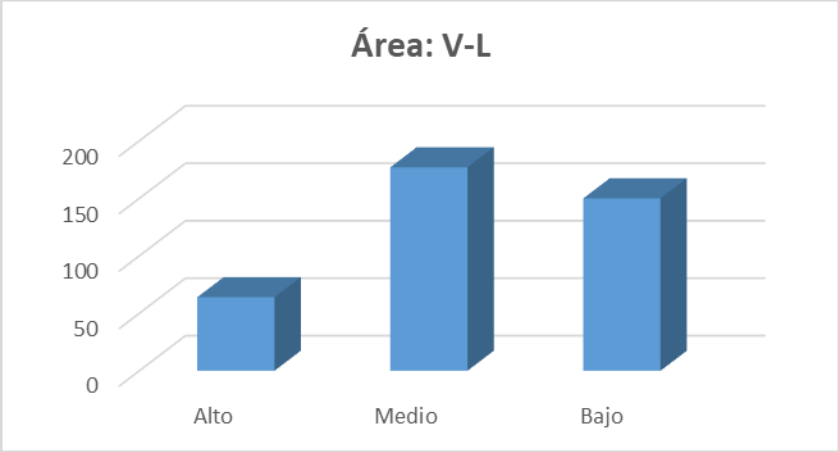

Figure 2. Percentage of students surveyed at UNAJMA (2020)

According to the Area: Area: Mathematical Logic, the students who were surveyed (2020), at the time of the survey, it was observed that 14.07% of students have a high level, 37.85% a medium level and 48.08% a low level, as observed in Table 3 and Figure 3.

Table 3 Area: Mathematical Logic of students who were surveyed (2020)

Level	N° of students	Percentage
High	55	14.07
Middle	148	37.85
Low	188	48.08
TOTAL	391	100.0

Note. Students surveyed in the 2020-I semester.

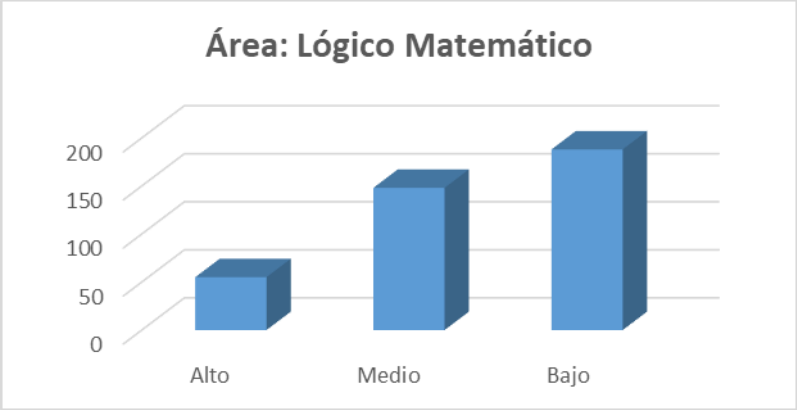

Figure 3. Percentage of students surveyed at UNAJMA (2020)

According to the Area: Music, the students who were surveyed (2020), at the time of the survey, it was observed that 15.09% of students had a high level, 28.13% had a medium level, and 56.78% had a low level, as shown in Table 4 and Figure 4.

Table 4 Area: Musical of students who were surveyed (2020)

Level	N° of students	Percentage
High	59	15.09
Middle	110	28.13
Low	222	56.78
TOTAL	391	100.0

Note. Students surveyed in the 2020-I semester.

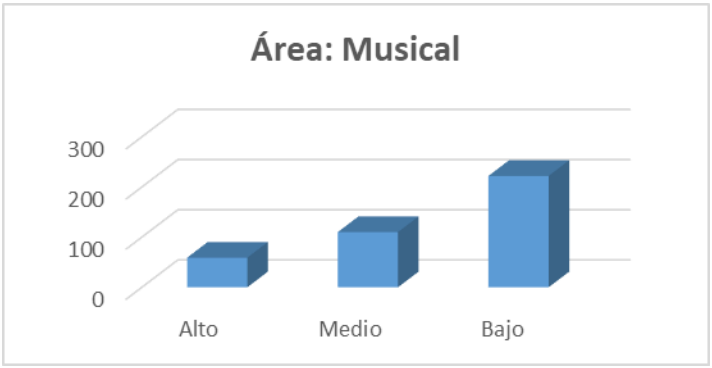

Figure 4. Percentage of students surveyed at UNAJMA (2020)

According to the Area: Spatial of the students who were surveyed (2020), at the time of the survey, it was observed that 14.07% of students had a high level, 37.60% a medium level and 48.34% a low level, as observed in Table 5 and Figure 5.

Table 5 Area: Spatial of students who were surveyed (2020)

Level	N° of students	Percentage
High	55	14.07
Middle	147	37.60
Low	189	48.34
TOTAL	391	100.0

Note. Students surveyed in the 2020-I semester

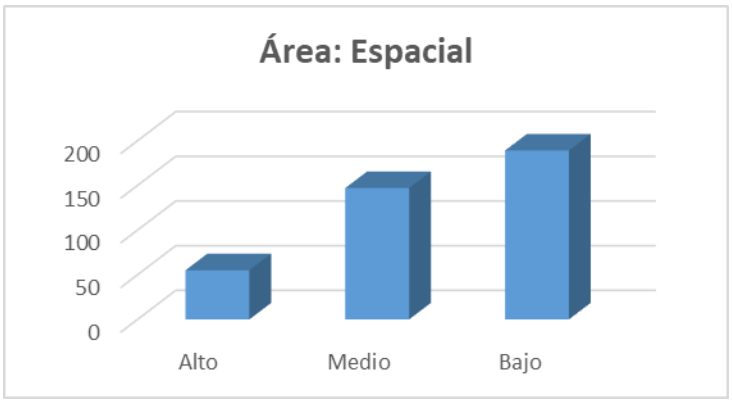

Figure 5. Percentage of students surveyed at UNAJMA (2020)

According to the Area: Body Kinesthetic students who were surveyed (2020), at the time of the survey, it was observed that 23.79% of students had a high level, 28.90% had a medium level and 47.31% had a low level, as shown in Table 6 and Figure 6.

Table 6 Area: Spatial of students who were surveyed (2020)

Level	N° of students	Percentage
High	93	23.79
Middle	113	28.90
Low	185	47.31
TOTAL	391	100.0

Note. Students surveyed in the 2020-I semester

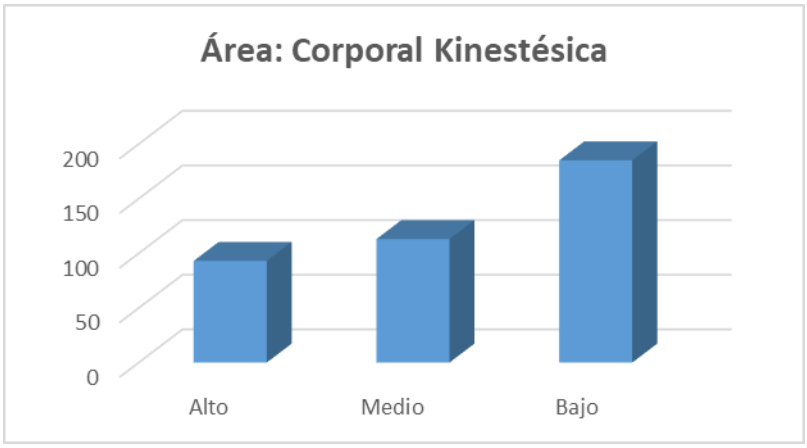

Figure 6. Percentage of students surveyed at UNAJMA (2020)

According to the Area. Among the students who were surveyed (2020), at the time of the survey, it was observed that 20.46% of students have a high level, 41.69% a medium level, and 37.85% a low level, as shown in Table 7 and Figure 7.

Table 7 Area: Interpersonal of students who were surveyed (2020)

Level	N° of students	Percentage
High	80	20.46
Middle	163	41.69

Low	148	37.85
TOTAL	391	100.0

Note. Students surveyed in the 2020-I semester

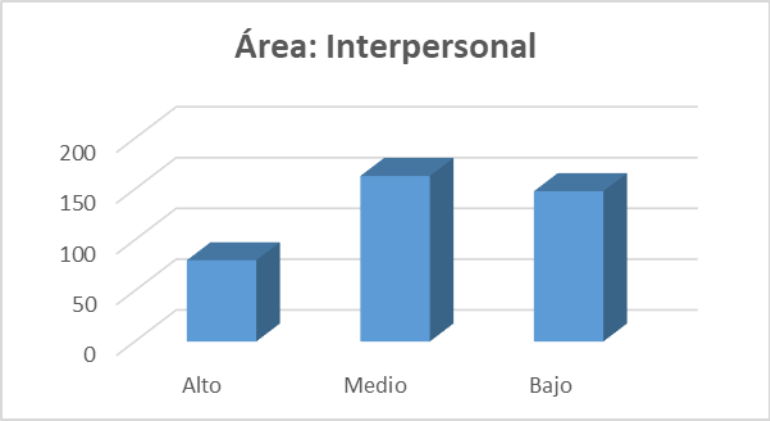

Figure 7. Percentage of students surveyed at UNAJMA (2020)

According to the Area: Intrapersonal of the students who were surveyed (2020), at the time of the survey, it was observed that 24.55% of students have a high level, 48.34% a medium level and 27.11% a low level, as observed in Table 8 and Figure 8.

Table 8 Area: Intrapersonal of students who were surveyed (2020)

Level	**N° of students**	**Percentage**
High	96	24.55
Middle	189	48.34
Low	106	27.11
TOTAL	391	100.0 %

Note. Students surveyed in the 2020-I semester

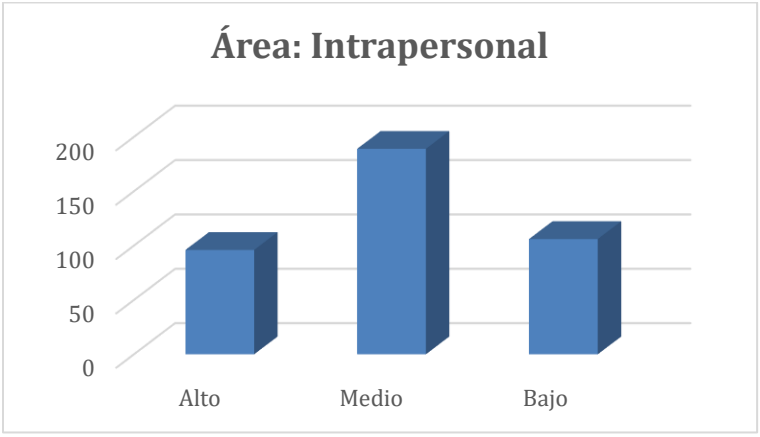

Figure 8. Percentage of students surveyed at UNAJMA (2020)

According to the Area: Naturalist/Ecological, the students who were surveyed (2020), at the time of the survey, it was observed that 40.66% of students had a high level, 40.66% had a medium level and 18.67% had a low level, as shown in Table 9 and Figure 9.

Table 9 Area: Naturalist/Ecological of students who were surveyed (2020)

Level	N° of students	Percentage
High	159	40.66
Middle	159	40.66
Low	73	18.67
TOTAL	391	100.0 %

Note. Students surveyed in the 2020-I semester

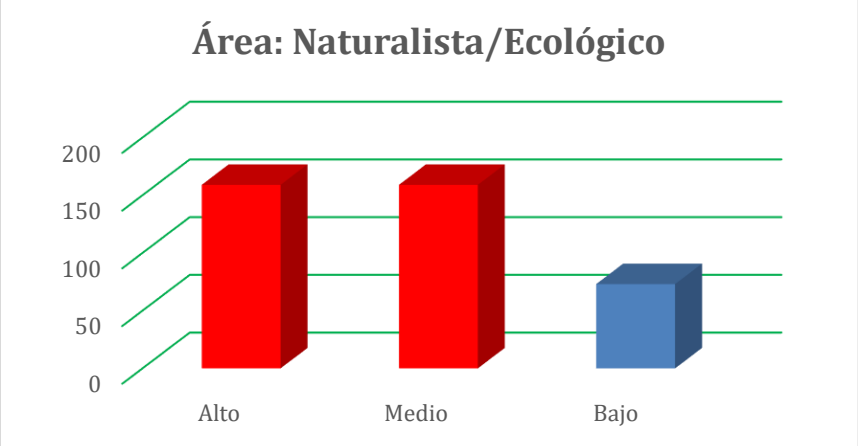

Figure 9. Percentage of students surveyed at UNAJMA (2020)

GENERAL OBJECTIVE

According to the level of intelligence of the students who were surveyed (2020), at the time of the survey, it was observed that in the verbal-linguistic it is 16% of the student presents a high level, in the logical-mathematical it is 14% of the student of high level, in the MUSICAL it is 15% of the student of high level, in the SPATIAL L is the 14% of high-level student, in COORPORAL-KINESTESICA it is 24% of high-level student, in INTERPERSONAL it is 20% of high-level student, in intrapersonal it is 25% of high-level student and the naturalist/ecological 41% of high-level student who were surveyed, as shown in Table 10 and Figure 10. The intelligences with the highest low level of incidence, above 35%, which is a worrying indicator, because it is more than a third of the applied population, are: linguistic, logical-mathematical, musical, kinesthetic, spatial and interpersonal, with percentages of 38.36%, 48.08%, 56.78%, 47.31%, 48.34% and 37.85% respectively. The only difference is that the intelligences: intrapersonal and naturalistic, are the ones with the lowest incidence of low level, whose percentages are below a third of the population, these being: 27.11% and 18.67%.

Table 10 Area: Naturalist/Student Ecologist (2020)

Intelligences	High level	Percentage
VERBAL-LINGUISTIC	64	16
LOGICAL-MATHEMATICAL	55	14
MUSICAL	59	15
SPATIAL	55	14
COORPORAL-KINESTHETIC	93	24
INTERPERSONAL	80	20
INTRAPERSONAL	96	25
NATURALIST/ECOLOGICAL	159	41
TOTAL		100.0 %

Note. Students surveyed in the 2020-I semester

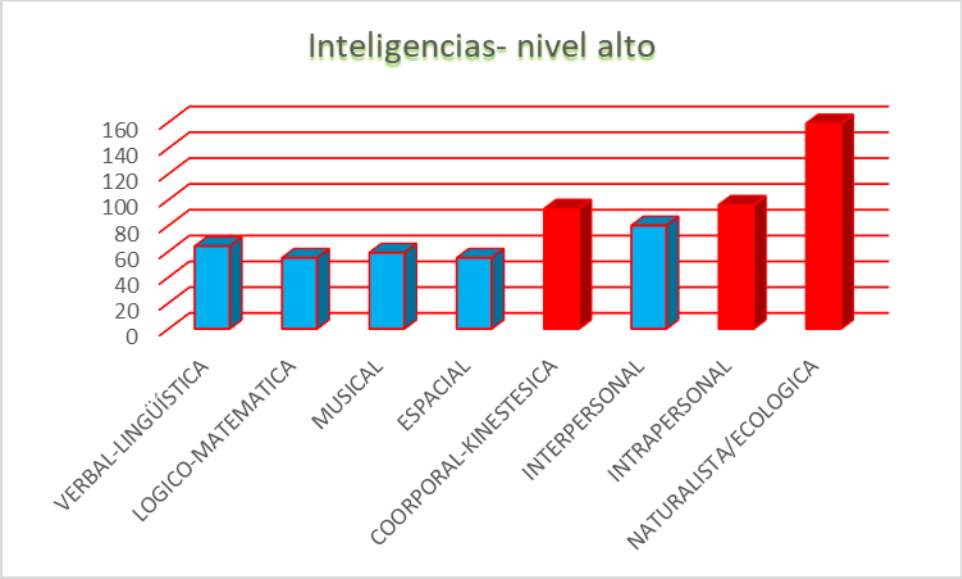

Figure 10. Percentage of students surveyed at UNAJMA (2020)

DISCUSSION

According to Howard Gardner, people have the type of intelligence among eight or nine different ones and in addition, individuals show a set of skills to solve everyday situations in a differentiated cultural context.

Table 11. Levels of Intelligences

Intelligences	High level	Medium level	Low level
VERBAL-LINGUISTIC	64	177	150
LOGICAL-MATHEMATICS	55	148	188
MUSICAL	59	110	222
SPATIAL	55	147	189
COORPORAL-KINESTHETIC	93	113	185
INTERPERSONAL	80	163	148
INTRAPERSONAL	96	189	106
NATURALIST/ECOLOGICAL	159	159	73

Note. Own elaboration (2024)

The level of general verbal-linguistic intelligence for the six professional schools of the 1st and 2nd cycles presents the following values; The low level reaches 38.36%, the medium level reaches 45.27%, and the high level 16.37%. The medium level is the highest, most frequent, and the most common. This shows that these students learn better, highlight and like reading and others to their complete satisfaction.

In this linguistic area, students perform at a low level according to the results obtained with the research, on the other hand, according to:

The level of general logical-mathematical intelligence for the six professional schools of the 1st and 2nd cycle of the National University presents the following values; The low level reaches 48.08%, which is a worrying value, so this area needs more attention in terms of the teaching that is being provided at the university, at the medium level it reaches 37.85% and the high level 14.07%. The medium level is the highest, most frequent, and the most common. In addition, the low level is worrisome, exceeding 30% of the total.

The level of general musical intelligence for the six professional schools of the 1st and 2nd cycle of the National University presents the following values; The low level reaches 56.78%, the medium level reaches 28.13%, and

the high level 15.09%. The low level is the highest, most frequent, and the most incident. In addition, the low level is highly preferred because it exceeds 50% of the total.

The level of general spatial intelligence of the six professional schools of the 1st and 2nd cycles of the National University presents the following values; The low level reaches 48.34%, the medium level reaches 37.70%, and the high level 14.07%. The low level is the highest, most frequent, and the most common level.

The level of general bodily-kinesthetic intelligence of the six professional schools of the 1st and 2nd cycle of the National University presents the following values; The low level reaches 47.31%, the medium level reaches 28.90%, and the high level 23.73%. The low level is the highest, most frequent, and the most incident. In addition, the low level is very worrying because it exceeds 45% of the total.

The level of general interpersonal intelligence for the six professional schools of the 1st and 2nd cycles of the National University presents the following values; The low level reaches 37.85%, the medium level reaches 41.69%, and the high level 20.46%. The medium level is the highest, most frequent, and the most common. In addition, the low level is worrisome, exceeding 16% of the total.

The level of general intrapersonal intelligence for the six professional schools of the 1st and 2nd cycles of the National University presents the following values; The low level reaches 27.11%, the medium level reaches 48.34%, and the high level 24.55%. The medium level is the highest, most frequent, and the most common. In addition, the medium level is preferential because it exceeds 35% of the total.

The level of general naturalistic-ecological intelligence for the six professional schools of the 1st and 2nd cycle of the National University presents the following values; The low level reaches 18.67%, the medium level reaches 40.66%, and the high level 40.66%. The medium and high level is the highest, most frequent, and the most incident. In addition, the medium and high level is highly preferred because it exceeds 35% of the total.

We can see that there are significant differences, depending on the levels reached. Some intelligences have strong low levels, such as logical-mathematical, spatial, and bodily levels. Some intelligences have very considerable average levels, such as interpersonal and intrapersonal intelligence, and a high level presents naturalistic intelligence.

CONCLUSION

After having applied the survey to 391 students, located between the 1st and 2nd cycle in six Professional Schools of the National University, of which the segments are: 61% of the first cycle and 39% of the second cycle.

In the eight multiple intelligences, for the applied sample, it is frequent, incident to the middle level, which shows that the students have average abilities developed in moderate and some in process, which make up the multiple intelligences, these being: Verbal in 45.27%, Logical-Mathematical 37.85%, Musical 28.13%, Spatial 37.60%, Kinesthetic 28.90%, Interpersonal 41.69%, Intrapersonal 48.34% and Naturalistic 40.66%. We do not expect that these intelligences are going to develop on their own, on the contrary, in order to strengthen development, a program must be generated that contributes to improving the low incident levels, which are generally mostly above 25%.

The intelligences with the highest low level of incidence, above 35%, which is a worrying indicator, because it is more than a third of the applied population, are: linguistic, logical-mathematical, musical, kinesthetic, spatial and interpersonal, with percentages of 38.36%, 48.08%, 56.78%, 47.31%, 48.34% and 37.85% respectively. The only difference is that the intelligences: intrapersonal and naturalistic, are the ones with the lowest incidence of low level, whose percentages are below a third of the population, these being: 27.11% and 18.67%.

However, multiple intelligences at the medium level are strengthened, which indicates an acceptable degree of development and in the process of achieving that at least 50% of the population under study manages to join the middle level.

RECOMMENDATION

Based on the results, we propose a complementary intervention program to seek to strengthen those multiple intelligences that have a lower level of development, such as the case of Musical, Spatial, Kinesthetic. Verbal, Mathematical, Inter and Intrapersonal intelligences will be strengthened throughout professional training.

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