

Multiple Intelligence and Learning Styles of Learners in Online Distance Learning: Basis of Intervention Program

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ABSTRACT

This study aims to determine the multiple intelligence and learning styles of the learners among the selected grade six students of Private and Public schools in Manila. The study used the Independent two-tailed test and made use of descriptive-correlational method of research design to determine the significant difference on the learning styles and Multiple Intelligence of the learners. The p-value is greater than the significance level, which means it is not significant and thus fails to reject the null hypothesis. The Pearson r correlation coefficient was used to measure the significant relationship on the Learning styles and Multiple Intelligence of the learners. The p-value is less than the significance level and is significant, and it has enough evidence to reject the null. The Kinesthetic Intelligence needs to be developed based on the result that has the lowest score among the selected grade six students and it is recommended for grade six teachers to implement the Theory of Multiple Intelligence and learning styles during online learning. Teachers should make use of a certain strategy to improve kinesthetic intelligence. For example, the teachers could give their students different project/experiment kits they can use at their respective homes virtually.

Keywords: Teaching and learning strategies, multiple intelligences, learning styles, learning performances, distance learning, online learning.

1. Introduction

The research has been done on the Theory of Multiple intelligences and different learning styles of the learners in the new normal. Due to the transition from face-to-face learning to distance learning, things have changed and become different for various aspects of education. The delivery of learning and teaching modalities have been affected by the global pandemic including education, and because of the situation worsened, the lockdown culminated in different institutions. The closing of schools, colleges and universities resulted stressful event in the administrators, and other school heads, teachers, parents and students. The unplanned and sudden transition from traditional to an exclusively online learning setup has changed the methods of educational institutions in delivering the courses for the students. Online learning in education can lead to more effective and easier access to a greater quantity of information to the students and teachers this time of pandemic. Distance Learning refers to a learning delivery modality, where learning takes place between the teacher and the learners who are geographically remote from each other during instructions' agreement between the parents and the school. The purpose of this study is to determine the multiple intelligence and learning styles of the learners among 80 selected students of a private and public schools in Manila, Philippines.

In 1993, Dr. Howard Gardner argues that humans possess a number of distinct intelligences that manifest themselves in different skills and abilities. This study is needed and the specific contribution of the research is to further knowledge in the field. The result of the study was designed to benefit the following especially this time of the new normal.

First, to the Learners, this study is important when it comes to equipping students with a better understanding on how they learn. In Multiple Intelligences Theory

application, when learners with high mathematical intelligence can put together a different virtual math exercises/ drills to help them learn, or learners with a high visual-spatial intelligence could create virtual drawings of concepts to help them learn as well. In Learning Styles application, auditory learning style- when learners learn by hearing and listening. Like learners are enjoy discussions and taking things through listening to others, acquire knowledge by reading aloud or talk to yourself. It helps students also to build up confidence as it demonstrates how they can use their strengths to address their weaknesses. It motivates students to find where their interest and strength lies and push their abilities further.

Second are the teachers; this study is important for the teachers to know their students' strength. Teachers should want to know what the best way to get individual students to process and absorb information to help students succeed academically. Third is school- this study is important to support their larger educational goals find that it is a worthy partner in creating schools of excellence. Fourth are the parents, this study is important to them because they play a significant role to their children in motivating, supervising and being partners in their children's daily play activities. The part of parents who are good at playing activities will also have a good impact on the cognitive development of their children and lastly the school management- this study is important to help provide the school management opportunities for authentic learning based on student's needs, interests and talents. To help evaluate the teacher's area of intelligence so that it could easily facilitate the school works/tasks in school. It conditions and attempts to determine the extent to which different variables related with each other.

2. Literature Review and Guiding Framework

Different activities such as linguistic, mathematics, spatial, physical and body movement, rhythm skills, ability of human relationship, self-understanding, love of natural environment and higher level of existence has resulted in an increase of multiple intelligence capabilities of student's (Siphai, Supandee, Raksapuk, Popayang, Kratooverk, 2017) and a variety of multiple intelligences support the learner's performance (Milad, 2018). Yaumi, Sirate and Patak (2018) revealed that multiple intelligences - based instructions, designing student-centered approach and learning and mentoring the implementation of student-centered learning indicated significant contribution on Multiple Intelligences development. Alqarni (2018) showed that the teacher's awareness of Multiple Intelligences practices had the highest relationship w/ the practice of bodily-kinesthetic intelligence practices had the highest relationship with the linguistic intelligence. Rusli and Negara (2017) concluded that there was no interaction effect between the factors of visualization types and learning styles, meanwhile Sever and Cokcaliskan (2018) revealed that most of the intelligence types and learning styles had a moderate positive correlation. Seventh, Hong et.al (2020) studied the relations between student's naturalistic, bodily-kinesthetic, spatial and logical intelligences and their hands-on making self-efficacy reflected in their attitude toward quality improvement in a science, technology, engineering, arts and mathematics contest. No two children think and learn the same way, all have experienced how it is sometimes necessary to present information in a completely different light to reach the student through online learning modalities. MI Theory confirms the empirical experiences and can provide educators with a framework and tools that will allow them to better meet the needs of different types of learners present in every classroom through online learning. The theory of Multiple Intelligence (MI) was first advanced by Dr. Howard Gardner, at Cognition and Education at the Harvard Graduate School of Education and adjunct professor of Psychology at Harvard University, in his 1983 book *Frames of Mind*.

Conceptual Framework showing the Multiple Intelligence of the Private and Public Schools Learners in Manila, Philippines. According to Dr. Gardner people all possess eight different types of Intelligence. Despite of many challenges in online learning during Covid-19 Pandemic, it is now demonstrating positive results in learning and providing a unique view of how people learn in online learning. These are the areas of Intelligence of the learners during online learning using the Theory of Multiple intelligences of Dr. Howard Gardner. Verbal-linguistic or word smart - learners describe the ability to enjoy debate and speeches in a virtual classroom. Good in spoken and written words. Visual-spatial or picture smart - learners who are good in learning visually especially in virtual images. Logical-mathematical or logic smart - learners who are good in learning through reasoning, problem- solving numbers with virtual images.

2.1. Multiple Intelligence



Figure 1. Conceptual Framework of Dr. Howard Gardner's Theory of Multiple Intelligence

Auditory-musical or music smart - learners who like to hear different audio sounds and music virtual quiz
 Bodily-kinesthetic or body smart - learners who like to perform a different video exercises, cutting virtual images & other virtual science experiments
 Interpersonal or people smart - learners who like to join in online group collaboration projects.
 Intrapersonal or self-smart - learners who are good in virtual word puzzles and like to do her own activities.
 Naturalistic or nature smart - learners who love to visit virtual museums, zoos and gardens on educational fieldtrips.

2.2. Learning Styles

The Conceptual Framework showing the VAK Learning Styles provides a simple way to explain and understand the learners own learning styles. It helps to design learning methods and experiences of the learners.

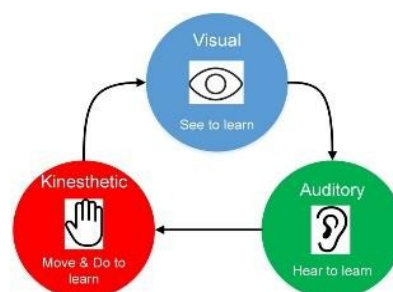


Figure 2. Conceptual Framework of VAK Learning Styles Model

These are the Visual-Auditory-Kinesthetic learning styles model usually abbreviated to VAK of the Private and Public-School learners in the online learning. Visual

learning styles - learners who prefer using pictures, images and spatial understanding.

Aural - learners who prefer using sound and music

Verbal - learners who prefer using words, both in speech and writing.

3. Research Method

3.1 Sampling Method

First, the researcher went to the two schools personally (Public and Private Schools) and submitted the two hard copies of questionnaires to the respective administrator staffs of the school and the approval letter of request from Department of Education-NCR for permission to conduct a survey.

Second, the researcher had no idea that the Public school had unexpected two (2) weeks holiday vacation (related to National election activities), and also in Private School, the grade six students were busy preparing for their periodical exams and other activities for their upcoming graduation, the researcher was not able to conduct a survey in limited face-to-face class, instead they allowed her to collect data via web-based google forms only.

Third, the researcher used purposive sampling to select the respondents. Forty (40) students each were selected from the public school and the private school, making it a total of eighty (80) respondents. The links of the two sets of google form questionnaires were distributed via emails and FB messengers of the respondents.

Fourth, the students answered the questionnaires without the assistance of their parents or siblings because the researcher had asked each one of them. There were some instructions before answering the web-based via google form questionnaires and informed them the purpose of the study and whatever information was given are just for academic research.

Fifth, before agreeing to participate by signing the questionnaires, the researcher have reminded them to ask any questions regarding the study.

3.2 Research Design

This study made use of the descriptive –correlational method of research design. It is descriptive to determine the significant difference on the Multiple Intelligences and learning styles when grouped according to their profile. It is correlational because it would determine the relationship between the multiple intelligence and the learning styles. This method was appropriate since the study involved the collection of data in order to determine the nature and degree of existing conditions and attempts to determine the extent to which different variables related with each other.

3.3 Research Instrument

The researcher was using a 4-point Likert scale Connell Multiple Intelligence Standardized Questionnaire for children and 4-point Likert Scale Assessment of Learning Styles of the Participants.

3.4 Statistical Treatment of the Data

The Standard deviation like the weighted mean was used to determine the learning style of the Private School and Public-School learners using online distance learning. Independent sample t-test was used to determine the significant difference on the learning style of Private and Public-school learners using online distance learning. The Pearson r correlation coefficient was used to measure the significant relationship between the multiple intelligence and learning styles of Elementary school learners.

3.5 Research Participants

Selected grade six students of Private and Public Schools in Manila, Philippines.

4. Results

Table 1 reveals the interpretation of the Learning style of the Private School Learners using online distance learning. The Learning style of Private school learners in Visual learning style obtained with the mean of 2.95, and standard deviation (SD) of 0.56 which means all students from the private school were interpreted with good in virtual object identification w/ materials such as students who love filming, videos, mapping and flowcharting using online distance learning. The weighted mean of 2.77 and standard deviation (SD) of 0.53 for Auditory learning style were interpreted the students with good in listening to audience recordings and can easily remember people by their voices, and for Tactile/Kinesthetic learning style obtained with the mean of 2.57 and standard deviation of 0.62 were interpreted with good which means all students enjoy virtual field trips and video performances. Based on the overall mean rating result of 2.76 and overall standard deviation (SD) of 0.57 the researcher concludes that the Private school learners are good in their learning styles. This implies that the Private School learners are good in three Learning styles.

Table 1. Learning Styles of the private school learners using online distance learning

LS	SD	WM
VLS	0.56	2.95
ALS	0.53	2.77
T/KS	0.62	2.57
OVERALL	0.57	2.76

Knowledge is acquired and learned throughout life, making it easier for everyone and conducive to learning. In the course of school life, some of the preferences that subjects when studying was discovered. These may have changed as life progress

and in interaction with the school environment, different versions and possibilities of grouping. According to Hsu T.C., (2017), learning style is a term that is usually used to indicate a series of different behaviors, gathered under a single name, and it refers to learning, it offers indicators that help to guide the person's interaction with reality. (An & Carr, 2017, p.215), state the importance of applying learning styles to perform a quality of the English language acquisition. Learning styles are cognitive, affective and physiological traits that serve as relatively stable indicators of how students perceive, interact and respond to their learning environments. These cognitive traits have to do with the way in which students structure contents, form and use concepts in order to solve problems or select information through the means of representation aims (visual, auditory, kinesthetic) (An & Carr, 2017 p.215).

Table 2 reveals the interpretation of the Learning style of the Public-School Learners using online distance learning. The Learning style of Public-school learners in Visual learning style obtained with the mean of 2.75, and standard deviation (SD) of 0.59 which means all students from the public school were interpreted with good in object identification with materials such as students who love filming, videos, mapping and flowcharting using online distance learning. The weighted mean of 2.79 and standard deviation (SD) of 0.61 for Auditory learning style and was interpreted the students with good in listening to audience recordings and can easily remember people by their voices, and the weighted mean of 2.51 and standard deviation of 0.49 for Tactile/ Kinesthetic learning style which means all students enjoy virtual field trips and video performances.

Table 2. Learning Styles of the public-school learners using online distance learning

LS	SD	WM
VLS	0.59	2.75
ALS	0.61	2.79
T/KS	0.49	2.51
OVERALL	0.56	2.68

Based on the overall mean rating result is 2.68 and overall standard deviation (SD) of 0.56, the researcher concludes that the Public-school learners are good in their learning styles. This implies that the Public-School learners are good in three learning styles.

According to Dunn and Dunn model defines Learning style as the way individual began to concentrate on, process, internalize and retain new and difficult information (Dunn and Dunn 1993). It incorporates twenty to twenty-one elements dependent on the age, appropriate assessments administered.

The Dunn Learning styles talk about five types of stimuli that can affect a student, and the elements that paly into each stimulus to set apart individual learners. These are the following: First the environmental, means you ask question about things like where learners prefer to get their learning Dunn. Second, the emotional, like levels of motivation and responsibility, how much the

student conforms and pursues a task until its Dunn and what sorts of structures are helpful for the learners. Third, the sociological, this is how the student works best on his/ her own, in pairs in group according to a certain pattern or with more guidance from the instructor. Fourth is physiological, this is all about the body responds to the learning task. It means that some students are more alert at certain times of day based on whether they had eggs or cereal for breakfast and lastly, psychological refers to how the learner process and responds to information and ideas; is the learner analytic and good with numbers or global, preferring to see the big picture? Is he/she a reflective, taking quiet time to puzzle out the answers?

Table 3. Significant difference on the Learning Style of Multiple Intelligence of the private and public school learners using online distance learning

Learning Styles	T-Test Value	P Value
VLS	1.554	0.124
ALS	0.156	0.876
T/KLS	-0.460	0.647
Learning Styles	T-Test Value	P value

Table 3 reveals that Independent two-tailed test used to determine the significant difference on the Learning style of Private and Public-School learners using online distance learning. The Learning style of Private and Public-school learners in Visual learning style obtained with the P value of 0.124 and T- test value of -1.554, the Auditory learning style with the P-value of 0.876 and T-test value of -0.156, and the Tactile / Kinesthetic learning style with the P value of 0.647 and T-test value of -0.460. As can be gleaned from Table 3, the P value is greater than the significance level of 0.05 is not statistically significant and indicates strong evidence for null hypothesis.

Table 4. Multiple intelligence of the private school learners using online distance learning

MI PRIVATE SCHOOL	SD	WM
VL	0.55	2.85
ML	0.60	2.60
MR	0.48	2.52
BK	0.66	2.48
VS	0.59	3.01
INTRA	0.59	2.88
INTER	0.57	2.88
N	0.75	3.01
OVERALL	0.60	2.78

Table 4 reveals the interpretation of the Multiple Intelligence of the Private School Learners using online distance learning. The Multiple Intelligence of Private School learners in Verbal-linguistic obtained with the mean of 2.85, and standard deviation (SD) of 0.55 which means all students from the private school were interpreted with good in written and oral skills. In Mathematical-logical with the mean of 2.60 and standard deviation (SD) of 0.60 and the students were interpreted with good in numbers and critical thinking. Musical-rhythmic with the mean of 2.52 and standard

deviation (SD) of 0.48 and the students were interpreted with good in musical instruments, rhythms and patterns, Bodily-kinesthetic with the mean of 2.48, standard deviation (SD) of 0.66 and the students were interpreted with average to express through movement and capacity to handle virtual objects, Visual- spatial with the mean of 3.01 and standard deviation (SD) of 0.59 and interpreted with good in ability to perceive, analyze and understand visual information. , Intrapersonal with the mean of 2.88, standard deviation (SD) of 0.59 and interpreted with good in self- reflective capacities. Interpersonal with the mean of 2.88, standard deviation (SD) of 0.57 and interpreted with good in sensitivity to other feelings, moods or talkers, and Naturalist with the mean of 3.01 and standard deviation (SD) of 0.75 and the students were interpreted with good with good in relating info

Based on the overall mean rating result is 2.78 and overall standard deviation (SD) of 0.60, the researcher concludes that the Private school learners are good in Multiple Intelligences. This implies that the Private School learners are good in Multiple Intelligence.

Table 5. Multiple intelligence of the public school learners using online distance learning

MI PUBLIC SCHOOL	SD	WM
VL	0.71	2.92
ML	0.71	2.53
MR	0.76	2.61
BK	0.67	2.49
VS	0.56	2.86
INTRA	0.61	2.94
INTER	0.58	2.90
N	0.65	2.89
OVERALL	0.66	2.40

Table 5 reveals the interpretation of the Multiple Intelligence of the Public-School Learners using online distance learning. The Multiple Intelligence of Public-School learners in Verbal-linguistic obtained with the mean of 2.92, and standard deviation (SD) of 0.71 which means all students from the private school were interpreted with good in written and oral skills. In Mathematical-logical with the mean of 2.53 and standard deviation (SD) of 0.71 and the students were interpreted with good in numbers and critical thinking. Musical-rhythmic with the mean of 2.61 and standard deviation (SD) of 0.76 and the students were interpreted with good in musical instruments, rhythms and patterns, Bodily-kinesthetic with the mean of 2.49, standard deviation (SD) of 0.67 and the students were interpreted with average to express through movement and capacity to handle virtual objects, Visual-spatial with the mean of 2.86 and standard deviation (SD) of 0.56 and interpreted with good in ability to perceive, analyze and understand visual information. Intrapersonal with the mean of 2.94, standard deviation (SD) of 0.61 and interpreted with good in self-reflective capacities. Interpersonal with the mean of 2.90, standard deviation (SD) of 0.58 and interpreted

with good in sensitivity to other feelings, moods or talkers and Naturalist with the mean of 2.89 and standard deviation (SD) of 0.65 and the students are interpreted with good in relating information to one's natural surroundings and enjoying the virtual nature fieldtrips.

Based on the overall mean rating result is 2.40 and overall standard deviation (SD) of 0.66, the researcher concludes that the Public-school learners are average in Multiple Intelligence. This implies that the Public-School learners are interpreted Average in Multiple Intelligence.

As early as in 1983, Gardner had stated that the potential utility of computers in the process of matching individuals to models of instruction is substantial". The statement has been verified by the distinct growth of eLearning, where creating eLearning activities that appeal to a variety of eLearning needs ensures that learners better understand the eLearning content in ways that are meaningful to them. In a recent Washington Post interview, Gardner also stated that the best way to take advantage of the theory of multiple intelligence is to first drop the term learning styles, which creates confusion, then individualize learning, suggesting a learner-centered approach and finally pluralize learning by incorporating multiple methods into it, and not just one. This way they can reach learners who learn in different ways.

Table 6. Significant difference on the multiple intelligence of private and public-school learners using online distance learning

MI PUBLIC SCHOOL	T-TEST VALUE	P-VALUE
VL	0.499	0.619
ML	-0.482	0.631
MR	0.678	0.500
BK	0.071	0.943
VS	-1.124	0.264
INTRA	0.478	0.634
INTER	0.221	0.826
N	-0.769	0.444

The researcher compared the total mean of Multiple Intelligence of learners from Table 4 with 2.78 and Table 5 with 2.40 in terms of their Multiple Intelligence to prove that the selected students are on the same level. To strengthen the result, two-tailed test was also applied. Table 6 reveals that Independent two-tailed test used to determine the significant difference on the Multiple Intelligence of Private and Public-School learners using online distance learning. The Multiple Intelligence of Private and Public school learners in Verbal- linguistic obtained with the P value of 0.619 and T- test value of 0.499, the Mathematical-logical with the P-value of 0.631 and T-test value of -0.482, the Musical-rhythmic with the P value of 0.500 and T- test value of 0.678, the Bodily-kinesthetic with the P value of 0.943 and T-test value of 0.071, the Visual- spatial with the P value of 0.264 and T-test value of -1.124, the Intrapersonal with the P value of

0.634 and T-test value of 0.478, the Interpersonal with the P value of 0.826 and T-test value of 0.221 and Naturalist with the P value of 0.444 and T-test value of -0.769.

As can be gleaned from Table 6, the P value is greater than the significance level of 0.05 is not statistically significant and indicates strong evidence for null hypothesis. According to MI theory, the dominant intelligence of a child is generally relevant to the child's interest (Armstrong, 2004). Through this learning strategy, interests and talents serve a means to learn the subject matter. Therefore, in application of this learning strategy, any type of student's dominant intelligence that may arise will be facilitated to evolve through appropriate activities, such as making songs for musical intelligence, writing poetry related to the subject matter for verbal-linguistic intelligences, designing games or performing role playing for kinesthetic intelligence.

Table 7. Relationship on the learning style and multiple intelligence of the learners in online distance learning

MI and LS PUB and PRIV SCHL	VAR 1	VAR 2	R VALUE	P- VALUE
PUBLIC SCHOOL	VLS	MI	0.711	0.00001
	ALS	MI	0.587	0.000069
	T/KS	MI	0.620	0.00002
PRIVATE SCHOOL	VLS	MI	0.664	0.00001
	ALS	MI	0.608	0.000032
	KLS	MI	0.616	0.000023

A Pearson correlation coefficient has been tested for this study between Multiple Intelligence and Learning styles of learners in online distance learning. The result in Table 7 based on the coefficient r and a generated P-Value < 0.00001 using $\alpha = 0.05$ for Visual learning style and Multiple Intelligence in Public elementary school there is a high positive correlation and other categories like Auditory and Kinesthetic/ Tactile have both moderate positive correlations using $\alpha = 0.05$. Based on the findings, the relationship of Visual Learning style and Multiple Intelligence obtain the P value of 0.00001 with r value of 0.711 interpreted with less than the significance level and is statistically significant between Multiple Intelligence and Learning style of Public-School learners in the online learning as evidenced by the obtained Pearson moment correlation r coefficient of 711, 587 and 620. In the Private school learners was obtained Pearson moment correlation r coefficient of 664, 608 and 616. According to Gardner's 1983 Multiple Intelligence Theory aimed to breakdown learning abilities based on learning styles. According to him, the notion of multiple intelligences "is a theoretical framework for defining/understanding assessing/developing people's different intelligence factors." One could argue that multiple intelligence theory focuses more on evaluating and understanding an individual's

intelligence than learning styles do. Gardner also emphasized that individuals possess each of these bits of intelligence, but it's the degree to which each one exhibits that's important to recognize. Learning styles emphasize that different ways people think and feel as they solve problems, create products, and interact. The theory of multiple intelligences is an effort to understand how cultures and disciplines shape student's potential."

5. Discussion

In view of information, accumulation and investigation of the Multiple Intelligences and Learning Styles of the selected Grade six students of Private and Public Elementary Schools are examined and determined to finish the investigation by the researcher with a few ends. For this purpose, the main tool is the Independent sample t-test is used to determine the significant difference between the Learning Styles and Multiple Intelligence of Private and Public-school learners using online distance learning. The P value is greater than the significance level, and the result is not statistically significant and indicate strong evidence for null hypothesis. The Pearson r correlation coefficient is used to measure the significant relationship between the multiple intelligence and learning styles of Elementary school learners. Based on the overall findings of the study, the Learning Style and Multiple Intelligence of students both in Private and Public schools to be lowest in ranked was Kinesthetic/ Tactile Intelligence.

The study concludes that both the Private and Public-school learners are good in their learning styles in using online distance learning. The study reveals that the Independent two-tailed test used to determine the significant difference on the Learning styles of Private and Public-school learners using online distance learning and the P-value is greater than the significance level. It is not statistically significant and indicates strong evidence for null hypothesis. The study concludes that the Private school learners are good in their Multiple Intelligence while the Public-school learners are average in their Multiple Intelligence in using online distance learning.

The study reveals the Independent two-tailed test used to determine the significant difference of the multiple intelligence of Private and Public-school learners using online distance learning and the P-value is greater than the significance level. It is not statistically significant and indicates strong evidence for null hypothesis. The study concludes the P-value has a high positive correlation and it is not statistically significant relationship between the Learning styles and Multiple Intelligence in the online distance learning as evidenced by the obtained Pearson moment correlation. The survey was conducted where the students answered the questionnaires via web-based google – form, based on the observation and experience of the students during online learning that each person has different ways of learning and

different intelligence and learning styles they use in virtual classroom class. While some students can learn very well in a linguistically-based environment (reading and writing), others are better taught through mathematical-logical based learning.

6. Conclusion

The study concludes that based on the responses of the learners, the teacher's observation on their learner's performance with regards to their learning styles of the Private and Public-school learners during online distance learning, all grade six students possess the three learning styles varying degrees. The visual learning style got the highest ranked in learning style while the lowest ranked was tactile/ kinesthetic styles and interpreted with good while the learner's performance with regards to their multiple intelligence of the Private and Public-school learners that Visual spatial and Naturalists got the highest ranked and Kinesthetic/tactile with an average in using online distance learning. The proposal for intervention program reveals the findings of the study that the learners will focus on the kinesthetic/tactile intelligence because it has a lowest ranked among the areas of intelligence and the researcher will propose the different project kits for the learners to improve their tactile/physical activities in the virtual room during online distance learning.

The implications based on the findings of the study that students with Kinesthetic weaknesses have trouble learnings things through sense of touch like experimenting some science activities at home, doing exercise sessions like bending their bodies. Studies show that students work better in Kinesthetic/Tactile intelligence accompanied by learning motivation will have high learning outcomes enabling them to be physically active and also found to be positive and significant.

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