

Learning Style Assessment: Using Visual, Auditory and Kinesthetic Model

JOSELYN D. PABITO

San Jose Leet Integrated School
Urdaneta City, Pangasinan
joselyn.pabito@deped.gov.ph

RUSSEL V. SANTOS

Urdaneta City University
Urdaneta City, Pangasinan
russelsantos@ucu.edu.ph

Abstract — This study aimed to determine and assess the learning style of kindergarten pupils in the Schools Division of Urdaneta using the VAK Model.

Specifically, it sought to determine the profile of the respondents in terms of age, sex, handedness, birth order, father's educational attainment and mother's educational attainment. Likewise, it looked into the level of performance of the learners along the learning style assessment such as (a) visual (b) auditory and (c) kinesthetic, the significant difference in the performance of the learner using VAK model when grouped according to age, sex and handedness, and the instructional material that can be proposed for the enhancement of kindergarten.

The descriptive method of research was used and the main instrument in collecting data is the questionnaire. In the distribution and selection of respondents, simple random sampling was used. In the statistical treatment of data, frequency counts and percentage, computation of the Average Weighted Mean and T-test were utilized.

Based on the analysis and interpretation of data, the following salient findings were drawn (1) majority of the respondents are five years old (199 or 58%), female 195 or 57%, right-handed 309 or 90%, are firstborn child 140 or 41%, whose father (116 or 34%) and mother (124 or 36%) are both high school graduates (2) the level of performance of the learners along (a) visual had an overall mean of 3.44, (b) auditory had an overall mean of 3.42, and (c) kinesthetic had an overall mean of 3.45, all three denoting a descriptive equivalent of Slightly Advanced Development (SAD) (3) there is no significant differences in the performance of the learner using VAK model when grouped according to age, sex and handedness.

From the findings of the study, the following conclusions were drawn (1) the kindergarten pupils are considered as young learners and had met the required age (2) their development along the VAK learning style assessment is slightly advanced (3) age, sex and handedness had no significant difference in the performance of the learner using VAK model.

In the light of the findings, the researcher arrived at the following recommendations (1) since majority of the pupils' parents are high school graduates, they are encouraged to enroll in short time courses that further enhance their knowledge and skills for them to guide their children in their academic journey (2) kindergarten teachers must also assess the learning style of each pupil at the beginning of the school year (3) a contextualized kindergarten toolkit and interactive digital learning material must be crafted by kindergarten writers for the enhancement of kindergarten learners in the Schools Division of Urdaneta City.

Keywords — *Learning Style, Assessment, Visual, Auditory, Kinesthetic*

I. Introduction

Each learner is unique from the others. Pupils naturally seek learning in a particular learning environment based on their capacity to absorb and retain new knowledge and insights. A student's individuality necessitates using the right learning techniques, which could ultimately help them succeed academically. Students that are aware of their learning preferences learn as swiftly as possible and eventually achieve academic success. Helping them identify their learning preferences may therefore enable them to gain skills that are essential for their daily life.

According to Pineda (2021), there are certain factors that affect pupils' learning styles. Examples of which are gender, years of age, family upbringing, ways of creative thinking and their academic achievement. It was also emphasized by scholars that acquisition of knowledge could be actualized through the four sensory modalities which are visual (by observing pictures, symbols or diagrams), auditory (by listening, discussing instructional material), visual iconic (by reading and writing) and kinesthetic (using tactile sensory abilities). In particular, another popular model of learning styles was the VAK model. The Visual-Auditory-Kinesthetic (VAK) model was conceived to be one of the simplest channels of vision, hearing, and feeling that could determine pupils' ways of learning.

Identifying the learning styles of students in school is considered as a teacher's responsibility (Shenoy & Shenoy, 2013). Profiling them enables the teacher to gain a better outlook on how learners obtain information. Also, being knowledgeable about the learning styles at educational institutes helps solve learning problems among students and allows students to become better learners (Sarabi, Asiabar, Jafari, Sadeghifar, Tofighi, Zaboli, Peyman & Shams, 2014).

In order to increase motivation and improve students' performance as well as to meet their preferred learning styles, it is important to update and fit teaching methods and evaluate their efficacy (Norman, 2009). Such suggested teaching method and instructions are the use of manipulative, visual aids, charts, audiotapes, and explicit expectations (Lawrence-Brown, 2014). Since learners acquire and process information at their own style such as seeing, hearing, reflection and action, thought analysis and imagination, differentiating of instruction is important (Jacques & Salmon, 2006).

The COVID-19 pandemic has changed the world. It greatly affected all sectors of society including education. According to United Nations, the global crisis has created the largest disruption of education systems in history. In the initial report of UNESCO in 2020, there are 1.6 billion learners in over 190 countries that were affected when schools were forced to closed down due to COVID-19 lockdowns. This emergency worldwide lockdowns made children unable to access in-person schooling.

The concern for the continued kindergarten education amid the COVID-19 crisis is a part of the Philippine Basic Education Learning Continuity Plan developed and implemented by the Department of Education as an educational strategy to pursue education. As the current trend in

the educational system in the Philippines centers on learners, individual differences are always considered a very integral component of the teaching-learning process. Changes in the educational system brought about by the advent of the 21st century which were mandated by the Department of Education in the Philippines are now in full implementation almost in every school nationwide. Distance education become the new normal in education amid the COVID-19 crisis. It identifies the most essential learning competencies (MELCS) and multiple distance learning delivery modalities that should be considered in developing instruction. In this effect, the learner, who is the main focus of the educational process, should remain to be the center and reason. The study of learning styles has been a growing educational trend, and it is believed that matching the learning styles of students with the mode of instruction actually aids in student learning. This is what the literature calls as the “meshing hypothesis” (Pashler, et.al., 2009).

Students can prefer one, two, or three learning styles. Because of these different learning styles, it is important for teachers to incorporate in their curriculum activities related to each of these learning styles so that all students are able to succeed in their classes (Cuaresma, 2008). In the kindergarten level, teachers facilitate the explorations of our young learners in an engaging and creative curriculum that is developmentally appropriate which immerse them in meaningful experiences. Provision of varied activities leads them to become emergent literates and, helps them to naturally acquire the competencies to develop holistically.

Included in the First Quarter competencies are My Self and My Family. Under these two competencies are different activities which recognizes the three most popular learning style of our learners-visual, auditory and kinesthetic.

Literature Review

According to Syofyan, et.al (2018), there are three (3) main learning styles, namely: visual, auditory and kinesthetic. Visual learners think in pictures and learn best in visual images. They depend on the instructor’s or facilitator’s non-verbal cues such as body language to help with understanding. Sometimes, visual learners like sitting in the front of the classroom. They also take descriptive notes over the material being presented. Auditory, these individuals discover information through listening and interpreting information by the means of pitch, emphasis and speed. These individuals gain knowledge from reading out loud in the classroom and may not have a full understanding of information that is written. Kinesthetic learner, individuals that are kinesthetic learn best with and active “hands-on” approach. These learners like interaction with the physical world. Most of the time kinesthetic learners have a difficult time staying on target and can become unfocused effortlessly (Pride, 2009).

As stated by Pereyra, Ramon in his study, knowing the various learning styles of the students, the teachers may seek to find various methods and techniques so that performance inside the classroom can be maximized, hence, students’ academic performance could be at a greater extent and also to have a basis in developing a module or a teaching activities in deepening learning

in Filipino. He also emphasizes that it will help a lot if the teachers will use different kinds of strategies and styles in their teaching that matches the learning styles of the learners resulting for better and easy way of learning.

Moreover, the study of Viashnav and Chirau (2013) showed that the three most popular learning styles which are visual, auditory and kinesthetic are significant on academic achievement. Their study revealed that kinesthetic learning style was found to be more prevalent than visual and auditory learning styles among secondary school students. There exists a positive high correlation between kinesthetic learning style and academic achievement. Very negligible positive correlation was found between visual learning style and academic achievement of students. Whereas positive low correlation between auditory learning style and academic achievement of students. Therefore, kinesthetic learners are more benefited in traditional classroom at secondary level.

According to the VAK model, the best way of lesson planning for a successful class should ideally incorporate activities that facilitate all three learning styles to cater to the needs of all pupils. A very good example is the use of differentiated activities. As every pupil learns by using all three styles not just their dominant one, providing for all three will create a rich educational environment for your pupils.

Learning styles make an essential component of how the teacher will demonstrate the students' knowledge to understand what is being taught easily (Busilaoco et al., 2014). By determining the students learning style, the teacher can develop activities and design approaches that is suitable to the learners' needs. In a study conducted by Pereyra in 2020 on the preferred learning and teaching styles in Filipino, he found out that the teaching and learning styles of the teachers and students are almost the same, hence they complement each other's style. The result of the study shows that almost of the preferred learning styles of the students are also the preferred teaching styles of the modern teachers today.

II. Methodology

Research Design and Strategy

The descriptive research design was used in the study. This design was the most appropriate approach as it aims to gather, analyze, correlate and tabulate data about the subject matter, determine the cause-effect relationship between independent and dependent variables with aid of the statistical method.

A descriptive research design can use a wide variety of research methods to investigate one or more variables. Unlike in experimental, the researcher does not control or manipulate any of the variables, but only observes and measures them.

Population and Locale of the Study

The respondents of the study were the kindergarten learners from the 46 schools in the Division Office of Urdaneta City. Simple random technique was used to get a sampling population. To get the sample size, the researcher used Slovin's formula to calculate an appropriate sample size from a total population using 0.05 as a margin of error. From the total population of two thousand four hundred ninety-seven (2497) which resulted to a computed sample size of three hundred forty-five (345) as a result of the Slovin's formula.

Table 1:
Distribution of Respondents Per School

Respondents	Population Size	Sample Size
Anonas East ES	38	5
Anonas ES	32	4
Bactad CS	35	5
Bactad East ES	29	4
Badipa ES	238	33
Bolaoen ES	21	3
Cabaruan ES	43	6
Cabuloan ES	58	8
Calegu IS	40	6
Camanang ES	70	10
Camantiles ES	64	9
Casabula ES	27	4
Catablan IS	47	6
Cayambanan ES	56	8
Consolacion ES	26	4
Don Alipio Fernandez Sr. Integrated School	47	6
Don Andres G. Maiquez Memorial School	55	8
Don Amadeo Perez Sr Memorial Central School-East	45	6
Don Amadeo Perez Sr Memorial Central School- Main	84	12
Don Amadeo Perez Sr Memorial Central School-West	22	3
Don Clemente Blanco Memorial Elementary School	11	2
Don Felipe Maramba Elementary School	51	7
Don Valentin M. Ordoñez Memorial School	21	3
Florentino B. Goce Community School	19	3
Labit East ES	47	6
Labit West ES	40	6
Lananpin ES	118	16
Lazaga ES	18	2
Manan ES	65	9
Nanbacuran ES	14	2
Nancalobasaan ES	38	5
Nancalobasaan Riverside ES	12	2
Nancayasan ES	86	12
Oltama ES	14	2
Palina East ES	84	12

Pinmaludpod ES	35	5
San Jose ES (3)	61	8
San Jose Leet IS (2)	39	5
Sta. Lucia ES	49	7
Tabuyoc ES	7	1
Tiposu ES	42	6
TSPES	13	2
Tulong ES	29	4
Urdaneta I CS	335	46
UICS SPED Center	119	16
Vicente Taaca MS	53	7
Total	2497	345

Data Gathering Tools

The questionnaire was the main instrument in gathering the needed data. The researcher develops a survey questionnaire that was given to all respondents which was validated by experts prior to the gathering of data. Part I contains the profile of the learners such as age, sex, handedness, birth order, Father's Educational Attainment and Mother's Educational Attainment.

Part II of the questionnaire contains the VAK performance of the learner along the following topic: a. Myself b. My Family. They are being assessed with the use of different activities that pertains to visual, auditory and kinesthetic. Specifically, there are 6 visual activities under Myself and 4 under My Family. For auditory, there are 3 activities both under Myself and My Family. While there are 7 activities for kinesthetic, 4 under Myself and 3 activities under My Family.

To determine the content validity of the instrument, the questionnaire was presented to 5 persons who are experts in constructing and validating survey materials. The improved draft of the questionnaire checklist was validated by the 5 experts, (Educational Program Supervisor in charge of Kindergarten, Public Schools District Supervisor, School Head/ principal and a Master Teacher) using the Survey/Interview Validation Rubric for Expert Panel (VREP) of Marilyn K. Simon and Jacquelyn White.

The following scale were utilized based on the Philippine Early Childhood Development Checklist (*Sociodemographic Profile of the Kindergarten Pupil*):

Numerical Equivalent	Likert Scale	Descriptive Equivalent
1	1.00-1.80	Significant and delay in overall development (1%-20% that the students perform the activity)
2	1.81-2.60	Slight delay in overall development (21%-40% that the students perform the activity)
3	2.61-3.40	Average overall development (41%-60% that the students perform the activity)
4	3.41-4.20	Slightly advanced development (61%-80% that the students perform the activity)
5	4.21-5.00	Highly advance development (81%-100% that the students perform the activity)

Data Gathering Procedure

The researcher asked permission prior to the administration of the instrument, a Letter of Request to conduct the Study was addressed to the Urdaneta City Schools Division Superintendent, Mdm. Fatima R. Boado, CESO VI and the school heads/ principals of the selected schools of the said division.

Treatment of Data

The statistical treatment employed in determining the profile distribution of the respondents were the frequency counts and percentages. On the other hand, the statistical treatment employed in the Visual, Auditory and Kinesthetic performance of the kindergarten pupils was the Average Weighted Mean using the aid of IBM Statistical Package for Social Sciences (SPSS) trial version 23.

In analyzing the significant difference in the performance of the learner using the Visual, Auditory and Kinesthetic Model when grouped according to age, sex and handedness, T-test was utilized at alpha 0.05.

III. Results and Discussion

This chapter presents the data, analyses on the data, statistical findings and the interpretation of salient findings. These are shown in tabular form and arranged in accordance with the order of the specific problems they are intended to answer.

Profile of Learners

Table 2 below presents the frequency and percentage distribution of the learners' profile.

**Table 2:
Profile of Learners**

Age	F	%
5 years old	199	58
6 years old	146	42
Sex		
Male	150	43
Female	195	57
Handedness		
Right	309	90
Left	36	10
Birth Order		
First	140	41
Second	105	30
Third and above	100	29
Father's Highest Educational Attainment		
Elementary Level	9	3
Elementary Graduate	8	2
High School Level	92	27
High School Graduate	116	34
College Level	60	17
College Graduate	51	15
Vocational	9	3
Mother's Highest Educational Attainment		
Elementary Level	8	2
Elementary Graduate	5	2
High School Level	86	25
High School Graduate	124	36
College Level	60	17
College Graduate	49	14
Vocational	13	4

Age. Majority of the learners are five years old (58%) than six years old (42%). Both these years are considered as young learners as described by Harmer (2007). According to him, within education, the term children are generally used for learners between the ages of about 2 to about 14. Students are generally described as young learners between the ages of about 5 to 9, and very young learners are usually between 2 and 5.

This inferred that most of the learners meet the required age qualification of Kindergarten learners as provided for in DepEd Order #20, s.2018 or the Cut-Off Age Policy for Kindergarten. However, pursuant to the "Kindergarten Education Act of 2012" (Republic Act #10157) and the K to 12 Law on the "Enhanced Basic Education Act of 2013" (Republic Act #10533), Kindergarten

education provides equal opportunities for all children to accessible, mandatory and compulsory kindergarten education those who are already 6 years old are also catered.

Sex. The results show that in terms of sex, majority are females (57%) than males (42%). This implies that education is dominated mostly by female learners. This is affirmed by the current enrollment data generated in the Learning Information System (LIS) on January 15, 2022, there are more female in Elementary including Kindergarten and Senior High School than male learners.

Handedness. Majority of the learners are right-handed (90%), while there were only few left-handed (10%). This is affirmed by the National Institute of Health which stated that hand preference is a conspicuous variation in human behavior, with a worldwide proportion of around 90% of people preferring to use the right hand for many tasks, and 10% the left hand.

Birth Order. The results show that learners are mostly firstborn child (41%), followed by the second born (30%) which is closed to the third and above birth order (29%). This implies that most of the parents are still in their first experience in sending their children in school

Father's Highest Educational Attainment. Most of the learner's parents are high school graduate (34%), high school level (27%), college level (17%) and college graduate (15%) while few are elementary level (3%), vocational graduate (3%), and elementary graduate (2%).

Mother's Highest Educational Attainment. Most of the learner's mother educational attainment are high school graduate (36%), high school level (25%), college level (17 %) and college graduate (14%) while few elementary are graduate (2%), elementary level (2%), and vocational graduate (4%).

Level of Performance of the Learners
Table 3: Visual Performance of Learners

Myself	Weighted Mean	Descriptive Equivalent
1. I Have Feelings (Adda Ti Nadumaduma A Riknak) Activity: Give the real color of the following obejcts. (Marisan dagiti banag iti husto a kolorda)	3.43	SAD
2. Symmetry (Own Body, Basic Shapes) (Maidasigko Dagiti Nadumaduma A Sukog Iti Bukodko A Bagi) Activity: Identifying the shapes of objects. (Maibaga ti sukog dagiti banbannag)	3.38	AOD
3. I Can Say The Same Letters, Numbers And Words In A Sentence (Maibagak Dagiti Agkapada A Letra,Numero Ken Balikas Iti Ragup) Activity: Identifying number of objects in a set. (Maibaga ti husto a bilang dagiti banbannag iti ragup)	3.33	AOD
4. Identifying One's Basic Body Parts (Maibagak Dagiti Nadumaduma A Paset Iti Bagik) Activity: Draw the missing parts of the body. (Idrawing dagiti parte iti bagi a mapukpukaw)	3.41	SAD
5. Functions Of The Part Of The Body (Maibagak Dagiti Nadumaduma Nga Usar Dagiti Paset Iti Bagi) Activity: Connect the parts of the body with their functions. (Pagselpuin babain ti linya dagiti parte iti bagi ken ti usar na)	3.38	AOD
6. Different Emotions (Nadumaduma A Panagrikna) Activity: Identify the kind of emotion portrayed in the given situation. (Ibaga nu anya ti marikriknam iti naited a kasasaad)	3.39	AOD
Average Weighted Mean	3.39	AOD
My Family		
7. My Family Provides My Shelter (Ti Pamiliak Ti Mangmangted Ti Pagtaengak) Activity: Check the pictures that show love for family and cross out the ones that do not show love for family. (Ikkan ti tsek ti pamilia nga agi-innayay. Ekis no madi)	3.49	SAD
8. My Family Provides My Food (Ti Pamiliak Ti Mangmangted Ti Taraonko) Activity: Color the nutritious foods and cross out those that are not. (Marisan dagiti makan a masustansya ken ekis nu madi)	3.50	SAD
9. My Family Provides My Clothing Needs (Ti Pamiliak Ti Mangmangted Ti Kawesko) Activity: Match the clothes they use with the proper weather conditions. (Ipaes dagiti bado a rumbeng nga usaren iti husto nga panawen)	3.49	SAD
10. I Can Name The Members Of My Family (Managanak Dagiti Kameng Ti Pamilia) Activity: Connect the picture with their appropriate name. (Igulis babaen ti linia dagiti ladawan iti husto a naganda)	3.53	SAD
Average Weighted Mean	3.50	SAD
Overall Weighted Mean	3.44	SAD

Legend:

Weighted Mean	Descriptive Equivalent	Description
4.21 to 5.00	Highly Advanced Development (HAD)	81-100% that the students perform the activity
3.41 to 4.20	Slightly Advanced Development (SAD)	61-80% that the students perform the activity
2.61 to 3.40	Average Overall Development (AOD)	41-60% that the students perform the activity
1.81 to 2.60	Slight delay in Overall Development (SOD)	21-40% that the students perform the activity
1.00 to 1.80	Significant and delay in Overall Development (SDOD)	1-20% that the students perform the activity

Table 3 shows that the learners are slightly advanced in their visual development

Table 3 shows that the learners are slightly advanced in their visual development (Overall Mean=3.44).

Table 4:

Myself	Weighted Mean	Descriptive Equivalent
1. Basic Needs And Ways To Care For One's Body (Mailasin Dagiti Nangnangruna Nga Usarin Ken Kasano A Taripatuen Ti Bukod A Bagi) Activity: Listen as your teacher reads each word. Box the picture shows what you do to keep your body clean. (Dumngeg kenni maestra bayat iti panagbasa na kadagiti sarita. Ikahon ti ladawan a maipakpakita nu anya dagiti rumbing nga aramidem nu kasatnu a tarupatuen iti bukod a bagi)	3.38	AOD
2. Movements Using Different Body Parts (Garaw Babaen Iti Nadumaduma A Paset Ti Bagi) Activity: Do what the teacher tells you to do with your given body parts. (Aramiden nu anya iti ibaga ni maestro babaen kadagiti nadumaduma a parte iti bagi)	3.41	SAD
3. Ways Of Cleaning And Taking Care Of The Body (Wagas A Panagdalus Ken Panagtaripato Iti Bagi) Activity: Know what are the ways of cleaning and taking care of the body by listening a short story. (Amuen nu kasatnu a tarepatuen ti bukod a bagi babain ti panagdenggeg iti ababa a istorya)	3.38	AOD
Average Weighted Mean	3.39	AOD
My Family		
4. Polite Expressions (Dagiti Nadayaw A Balikas/Sarita) Activity: The teacher will read a short story then the pupils will identify all the polite expressions mentioned in the story. (Agbasa ni maestra ti ababa nga istorya ket ibaga dagiti ubbing nu anya dagiti nadadayaw a sarita a nausar iti istorya)	3.47	SAD
5. Name The Foods, Animals, Toys, Friends And Places You Like And Dislike (Pagsaritaan Dagiti Kayat Ken Saan A Kayat A Makan, Ayup, Ay-Ayam, Gayyem Ken Lugar) Activity: The teacher will play the sounds of different animals then the pupils will identify its name. (Ipangek ni madam dagiti nairekord nga uni dagiti nadumaduma nga dingwen ket ibaga dagiti ubbing iti	3.46	SAD

husto a naganna)

6. My Family Participates In The School Activities
 (Ti Pamiliak Ket Makidanggay Kadagiti Aktibidades Iti Pagadalan)
 Activity: The teacher will give one activity done in the school and let the pupils tell what are the things that must be done in that activity. 3.41 SAD
 (Ni maestra ket mangited ti maysa nga aktibidad nga maararamid iti pagadalan ket ibaga dagiti ubbing nu anya dagiti rumbeng nga aramiden iti daya nga aktibidad)

Average Weighted Mean	3.45	SAD
Overall Weighted Mean	3.42	SAD

Auditory Performance of Learners

Legend:

Weighted Mean	Descriptive Equivalent	Description
4.21 to 5.00	Highly Advanced Development (HAD)	81-100% that the students perform the activity
3.41 to 4.20	Slightly Advanced Development (SAD)	61-80% that the students perform the activity
2.61 to 3.40	Average Overall Development (AOD)	41-60% that the students perform the activity
1.81 to 2.60	Slight delay in Overall Development (SOD)	21-40% that the students perform the activity
1.00 to 1.80	Significant and delay in Overall Development (SDOD)	1-20% that the students perform the activity

Table 4 shows that the learners are slightly advanced in their auditory development (Overall Mean=3.42).

Kinesthetic Performance of Learners

Table 5:

Myself	Weighted Mean	Descriptive Equivalent
1. Knowing One's Self (Maamamo Ti Bukod A Bagi) Activity: I can draw myself (Maidrawing ti bukod a bagi)	3.43	SAD
2. I Do Many Things in School (Adu Ti Kabaalak Nga Aramiden Iti Uneg Ti Pagadalan) Activity: I can draw (Kayak ti agdrawing)	3.42	SAD
3. Kinds of Line (Nadumaduma A Uged) Activity: I can draw vertical, horizontal, curve and slanting lines (Maigulis ko ti pababa, paidda, pakurba ken pahilis a linya)	3.46	SAD
4. I Can Move Myself in Many Ways (Maigarawko Ti Bagik Iti Nadumaduma A Wagas) Activity: I can walk, run and hop (Kayak ti magna, agtaray ken aglagto)	3.45	SAD
Average Weighted Mean	3.44	SAD
My Family		
5. My Family (Ti Pamilia) Activity: Draw the different members of the family. (Maidrawing dagiti miyembro iti pamilia)	3.50	SAD
6. We Care For One Another In Our Family	3.46	SAD

(Panangisakit/Panagaywan Iti Tunggal Miembro Ti Pamilia)

Activity: Portray how we care for one another in our family. (Ipakita nu kasatnu tayo nga ayaten/aywanan iti tunggal miembro ti pamilia)

7. My Family Members Help One Another By Doing Different Roles

(Dagiti Amin A Miembro Ti Pamilia Ket Agtitinnulong Kadagiti Amin Nga Ar-Aramiden)

3.42

SAD

Activity: Portray how we help one another.

(Ipakita nu kasatnu nga agtitinnulong ti maysa a pamilia)

Average Weighted Mean	3.46	SAD
Overall Weighted Mean	3.45	SAD

Kinesthetic Performance of Learners

Legend:

Weighted Mean	Descriptive Equivalent	Description
4.21 to 5.00	Highly Advanced Development (HAD)	81-100% that the students perform the activity
3.41 to 4.20	Slightly Advanced Development (SAD)	61-80% that the students perform the activity
2.61 to 3.40	Average Overall Development (AOD)	41-60% that the students perform the activity
1.81 to 2.60	Slight delay in Overall Development (SOD)	21-40% that the students perform the activity
1.00 to 1.80	Significant and delay in Overall Development (SDOD)	1-20% that the students perform the activity

Table 5 shows that learners are slightly advanced in their auditory development (Overall Mean=3.45). This implies that learners perform 61%-80% of the auditory activities. Among the four activities under myself, I can draw vertical, horizontal, curve and slanting lines, has the highest mean (3.46), followed by I walk, run and hop (3.45), I can draw myself (3.43) and I can draw (3.42), all with a descriptive equivalent of slightly advanced development. This means that

Difference Between Learner's Performance in Visual and Learner's Age, Sex, and Handedness

Table 6:
Difference Between Learner’s Performance in Visual and Learner’s Age, Sex, and Handedness

Learning Style	Profile Variable	Mean	df	T stat	T critical
Visual	Age	3.4099	343	-0.62	1.97
	Sex	3.4167	343	-0.32	1.97
	Handedness	3.4600	343	1.80	1.97
Auditory	Age	3.3922	343	-0.68	1.97
	Sex	3.37.55	343	-0.82	1.97
	Handedness	3.4420	343	1.55	1.97
Kinesthetic	Age	3.4385	343	-0.29	1.97
	Sex	3.4257	343	-0.48	1.97
	Handedness	3.4735	343	1.55	1.97

* denotes significance at 0.05 level

The result shows that there is no significant difference between learner’s performance in visual and learner’s age, (tstat=-0.62) sex (tstat= -0.32 < tcritical=1.97), and handedness (tstat= 1.80) thus, null hypothesis is accepted. This implies that in visual activities both male and female perform the same. However, Taverna et al. (2020) claimed there is a gender gap in visual-spatial skills of children where boys outperform girls in visual-spatial activities. Visual- spatial is defined as cognitive skills necessary for solving everyday tasks such as reading maps and navigating traffic (Gonzales-Campos, Sanchez-Navarro & Arnedo-Moreno, 2019).

IV. Conclusion

Based on the findings presented, the following conclusions were drawn:

1. The kindergarten pupils are considered as young learners and had met the required age.
2. Their development along the VAK learning style assessment is slightly advanced.
3. Age, sex and handedness had no significant difference in the performance of the learners using VAK model.

REFERENCES

- [1] Armstrong, P. (2010). Bloom’s Taxonomy. Vanderbilt University Center for Teaching. Retrieved [todaysdate] from <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>.
- [2] Asio, J.M.R., & Jimenez, E.C. (2020). Professional development, organizational climate, supervisory rapport and overall satisfaction of employees: An attitudinal study. *International Journal of Scientific Research in Multidisciplinary Studies*, 6 (4), 34-40. <https://doi.org/10.6084/m9.figshare.12698195.v2>

- [3] Barbe, W.B., Swassing, R.H. & Milone, M.N. (1979). Teaching through modality strengths: concepts and practices. Columbus, Ohio: Zaner-Bloser.
- [4] Barbe, W.B. & Milone, Jr., M.N. (1981). What We Know About Modality Strengths. Educational Leadership (Association for Supervision and Curriculum Development): 378–380.
- [5] Bozkurt, A., & Sharma, R. C. (2021). On the verge of a new renaissance: Care and empathy oriented, human-centered pandemic pedagogy. Asian Journal of Distance Education, 16(1), i-vii. <https://doi.org/10.5281/zenodo.5070496>.
- [6] Busilaoco, F.C., Lao, S.R. (2014). Learning Style and Student's Achievement in Science. July 2014. IAMURE International Journal of Multidisciplinary Research. https://www.researchgate.net/publication/287367945_Learning_Style_and_Students'_Achievement_in_Science
- [7] Cahapay, M.B., Loriania, J.B., Labrador, M. P., Bangoc, N.F. II (2021). Instructional Development for Distance Education amid COVID-19 Crisis in the Philippines: Challenges and Innovations of Kindergarten Teachers. Asian Journal of Distance Education, Vol. 16, Issue 2.
- [8] Francisco, C.DC., & Celon, L.C. (2020). Teachers' instructional practices and its effects on students' academic performance. International Journal of Scientific Research in Multidisciplinary Studies, 6(7), 64-71. <http://dx.doi.org/10.21474/IJAR01/987>.
- [9] Gappi, L. L. (2013). Relationships between learning style preferences and academic performance of students. International Journal of Educational Research and Technology, 4(2), 70-76.
- [10] Gonzalez-Campos, J.S., Sanchez- Navarro, J. & Arnedo-Moreno, J. (2019). An empirical study of the effect that a computer graphic course has on visual-spatial abilities. International Journal of Educational Technology in Higher Education 16, 41 (2019). <https://doi.org/10.1186/s41239-019-0169-7>.
- [11] Good, Jonathan P., Ph.D. et. al. (2013) Learning Style Preferences and Academic Success of Preclinical Allied Health Students. https://www.researchgate.net/profile/Jonathan_Good/publication/259270902
- [12] Gromada, A., Rees, G., & Chzhen, Y. (2020). Worlds of influence: Understanding what shapes child well-being in rich countries. Innocenti Report Card 16. Florence: UNICEF Office of Research – Innocenti.
- [13] Hawk, Thomas F., and Amit J. Shah. (2007). Using learning style instruments to enhance student learning. Decision Sciences Journal of Innovative Education, 5 (1) 1-19
- [14] Karen D. K' Onings, Saskia Brand-Gruwel and Jan Elen (2012), Effects of a school reform on longitudinal stability of students' preferences with regard to education, Maastricht University, The Netherlands, British Journal of Educational Psychology (2012), 82, 512–532. <http://doi.org/10.1111/j.2044-8279.2011.02044.x>
- [15] Pereyra, R. (2020). Preferred Learning and Teaching Styles in Filipino-8: Basis for Developing Learning Modules. ISSN 2435-5240 The Southeast Asian Conference on Education 2020: Official Conference Proceedings <https://doi.org/10.22492/issn.2435-5240.2020.6>
- [16] Philpott, D. (2021, March 30). 'Generation C': Why investing in early childhood is critical after COVID19. The Conversation. <https://theconversation.com/generation-c-why-investing-in-earlychildhood-is-critical-after-covid-19-157095>.

- [17] Smith, Linda H., Renzulli, Joseph S. (2018) The Assessment and Application of Learning Style Preferences: A Practical Approach for Classroom Teachers. Eric Publications. <https://doi.org/10.1080/00405848409543088>
- [18] Suarez-Embalsado, S. (2018). The Makings of 21st Century Learners: Correlation between the Learning Style and achievement Level of Grade Six Students of Tanauan South Central School. Future Ed Special edition: Multidisciplinary research Journal, Vol. 05, No. 01, p.61.
- [19] Taverna, L., Tremolada, M., Dozza, L., Scaratti, R.Z., Ulrike, D., Lallo, C., & Toso, B. (2020). Who Benefits from An Intervention Program on Foundational Skills for Handwriting Addressed to Kindergarten Children and First Graders? International journal of Environmental Research and Public Health 17(6), 2166; <https://doi.org/10.3390/ijerph17062166>

AUTHOR'S PROFILE



JOSELYN D. PABITO

Joselyn D. Pabito is a graduate of Bachelor of Elementary Education, major in Pre-school at University of Saint Louis Tuguegarao, Tuguegarao City. She took her Master of Arts in Education major in Early Childhood at Urdaneta City University. Currently, she is a kindergarten teacher of San Jose Leet Integrated School, Schools Division Office of Urdaneta City for 15 years and 7 months.



DR. RUSSEL V. SANTOS

Dr. Russel V. Santos is a graduate of Bachelor of Secondary Education, major in General Science, graduated With Honors at University of Luzon and took her Master of Arts in Education major in Educational Management and Doctor of Philosophy major in Development Education in the same institution and graduated with Meritus Award. Currently, she is an Assistant Professor

III and designated as Program Head in the College of Teacher Education at Urdaneta City University and Part Time Professor in the Institute of Graduate School and Advance Studies and served as a Head Teacher III for 7 years and a classroom teacher for 13 years in the Department of Education. She is also the author of the articles New-Normal-Secondary-School-Management-And-ItsCorrelates-The-Public-Educational-Institutions found @ <https://www.ijstr.org/finalprint/oct2021>; Stakeholders' Participation of the Implementation of Senior High School Program found in <https://www.ijams-bbp.net/archive/vol-2-issue-9-september/>; and Solid Waste Management Program Implementation Combating Hazardous Impairment in <https://www.irejournals.com/past-issue/volume-6/issue-12/>