



Development of a Visual, Auditory and Kinesthetic (VAK) Model-Based Classroom Management Toolkit for Pre-Service Teachers

Maria Angelica C. Mugot

Lourdes College, Cagayan de Oro City, Philippines mariaangelicamugot@gmail.com

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Abstract

Classroom management is essential in students' learning. This embedded mixed study intended to develop a classroom management toolkit for pre-service teachers based from Fleming's (2001) visual, auditory and kinesthetic (VAK) model. The activities were designed to pre-service teachers teaching Preschool to Grade 3 classes. In developing the toolkit, Analysis, Design, Development, Implementation and Evaluation or ADDIE model was used. The evaluation of implementers and experts was done through the use of the researcher-modified VREP by Simon and White (2011). Descriptive statistics was used to treat the data gathered. The general findings showed that the toolkit "exceeds the expectations" of the implementers and majority of the implementers found the toolkit "effective", "useful" and "helpful." From the findings of the study, it is, thus, recommended that higher educational institutions that train pre-service teachers may utilize the developed VAK model based-classroom management toolkit. Moreover, teachers in early childhood may use the toolkit. Future studies may be planned out for the improvement in terms of more classroom management strategies in the VAK model-based classroom management toolkit for pre-service teachers.

Introduction

Through several interviews and observations, both early childhood education pre-service teachers and seasoned early childhood educators have attested and manifested struggles in classroom management. Past researches on classroom management revealed that it has consistently ranked on top as one of the most difficult problems experienced by neophyte teachers and this includes pre-service teachers (Clunies-Ross, Little &

Kienhuis, 2008; Borden, 2013). Pre-service teachers experience difficulties in applying what they have believed to be effective from their theoretical learning to what they are experiencing in reality which includes classroom management (Akiyama, 2009).

One of the main factors contributing to the challenge of employing classroom management among early childhood education pre-service teachers is the diversity of young learners. The challenge experienced

by early childhood education pre-service teachers double-up with the responsibility of dealing with young learners' differences and at the same time, providing classroom experiences that will be developmentally appropriate to the young learners.

Young learners, unique as they are, differ in many aspects in their way of learning. It is claimed that a significant factor leading to these young learners' academic success and manifestation of lesser challenging behaviors is classroom management (Rosas & West, 2008; Conner, 2015). Two of the main ideas about an individual's learning preference state that these preferences influence a learner's behaviour towards learning and taking these preferences strategically in teaching, could positively gear towards better learning (Fleming & Baume, 2006). An understanding of employing proper classroom management techniques leads to the success and effectiveness of the teacher's instruction and would also prevent misbehaviors in class (Alexander, 2014). This study takes these points with the intent of developing a classroom management toolkit based on the learners' learning styles.

On the learners' learning styles, this study focused on the learners' preferred learning styles according to Neil Fleming's (2001) Visual, Auditory and Kinesthetic modal preferences for learning or the VAK Model. Visual, auditory and kinesthetic learning preferences have been recognized as "three of the most popular learning preferences" (Gilakjani, 2012). Though it has been lately recognized as Visual, Auditory, Read/Write and Kinesthetic (VARK) model, the researcher finds the read/write preference as part of the visual preference; hence, the use of VAK model as the anchor of the study has been decided.

This study aimed to provide a guide for early childhood education pre-service teachers through appropriate classroom management techniques harmonious to that of their learners' preference through the development of a relevant toolkit. The development of a VAK model-based classroom management toolkit for early childhood education pre-service teachers will be the end product of this study.

Objectives

This study proposed to develop a Visual, Auditory and Kinesthetic (VAK) model-based classroom management toolkit for pre-service teachers.

Specifically, this study aimed to attain the following;

1. formulate toolkit;

2. evaluate toolkit; and
3. revise toolkit.

Literature Review

Right from the start of the school-year, a plan in classroom management is a major factor that augments a positive learning classroom environment (Capizzi, 2009). An effectively managed class would lead to positive educational outcomes (Padmaja, 2012). When classroom management is employed effectively, better behaviors will be manifested by the learners in class (Cotton & Dustova, 2015). However, classroom management has been set as one of the most important as well as the most challenging role of a teacher (Marzano & Mazano, 2003; Pinto, Karthik, & Chattopadhyay, 2016).

Challenges on classroom management do not exempt both seasoned and neophyte teachers (Lacher & Zich, 2014) but according to Macias & Sanchez (2015), more struggles in classroom management could be due to the teacher's lack of experience and learner's level and differences in learning. Drang (2011) pointed out that the pre-service teachers in early childhood education as beginners in the field of teaching and as teachers of young children face a high level of challenge in classroom management. Pre-service early childhood teachers' job stress is of higher extent, with the presence of stress in the nature of teaching young children, which has a negative effect on the teacher's effectiveness teaching (Romero, 2011). However, the result of Yüksel's (2014) study reveals that the pre-service teachers may overcome this through establishing classroom management skills.

Part of the classroom management proficiency of the teachers requires knowledge of how learners learn (Fatt, 2000) and establish learner-appropriate approaches (Baeten, et. al, 2016). As stated by Reupert & Woodcock (2010), there has to be a wide range of classroom management techniques to effectively target the variety of the learners' behaviors. A very important factor that an early childhood education pre-service teachers need to consider in providing effective classroom management strategies is the diversity of young learners. One of the benefits of knowing learning styles is to embed them with the ways of teaching (Vaishnav, 2013); therefore, there is a need for teachers to suit their ways of teaching to their learners' ways of learning (Kara, 2009).

In the study of Hawk & Shah (2007); the authors posited various learning styles which have been maximized to enhance student learning and one of which

is the visual, auditory and kinesthetic (VAK) Model by Neil Fleming (2001), an instructional preference which deals with perceptual modes. Even with criticisms on VAK model as a form of labelling students, its application in teaching and learning still evidently gears toward the improvement of the teaching-learning process (Ganesh & Ratnakar, 2014).

The VAK model stands for visual, auditory and kinesthetic sensory models. Visual learning style is the preference for seen and observed things; auditory learning style is the preference for listening; and kinesthetic learning style is the preference for physical experience (Fleming & Bonwell, 2012; Basheer, Tang & Ahmad, 2016; Gilakjani, 2012). VAK model presents a different view on an individual's preferred learning style (Gholami & Bagheri, 2013). Fleming (2001) offers these various classroom approaches on each of the perceptual modes that can be applied by teachers to match with the learners' learning styles leading towards mutual understanding between teachers and learners.

A study on the teaching-learning resources anchored on the inclusion of visual, auditory and kinesthetic model concluded that use of resources based on the learners' learning styles help learners learn better and it is also beneficial for the teachers (Alexandra & Georgeta, 2010). Even with several researches pointing to the relevance of knowing the learning styles of the learners and meshing it with the instructional strategies of the teachers (Pashler et. al, 2009), there is still a need to provide resources for pre-service teachers most especially in classroom management.

Akiyama (2009) and Rosas & West (2008) found out that despite the 4-year preparation before pre-service teaching, there is still a significant difference of what the pre-service teachers believed in and their application of classroom management in their practicum. There is a need to take action through trainings and skill-building activities to reinforce the need of pre-service teachers in providing effective classroom management (Putman, 2009). Nard (2007) opined that after providing support and training in classroom management to beginning teachers, there has been a significant improvement on the teacher's classroom management abilities, as well as their learners' behavior.

These studies imply the need of providing guiding opportunities for pre-service teachers in classroom management that would be appropriate with their learners. The researcher aimed to develop a toolkit as a by product of VAK model-based classroom management

strategies. Analysis, Design, Development, Implementation and Evaluation or ADDIE model served as the process of developing the toolkit. The toolkit should target the teaching-learning process (Gülbahar et. al., 2017) through incorporating the learning styles of learners with the teachers' classroom management strategies.

Conceptual Framework

This study assumes that classroom management toolkit anchored on the visual, auditory and kinesthetic (VAK) modalities of learning of Neil Fleming (2001) would be an essential guide for early childhood education pre-service teachers in employing effective classroom management strategies.

This study aimed to develop a classroom management toolkit mainly anchored on Neil Fleming's VAK Model (2001). VAK is an acronym that consists of three (3) preferred modes of learning which are visual, auditory and kinesthetic. VAK is one of the most well-known learning styles (Saga, Qamar & Trali, 2015). Fleming (2001) emphasized that the importance of knowing one's modal preference is its significance to better learning. It is believed that these learning preferences can serve as basis for strategies in both teaching and learning (Baume & Fleming, 2006). Learners when taught with their learning styles, visual, auditory and kinaesthetic preferences, will learn more effectively (Laptad, 2008).

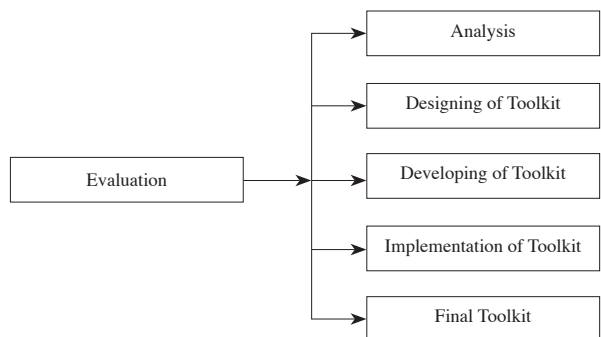


Figure 1 Process Flow

He (2009) further advanced the need of teacher's knowledge of the learning styles to be applied in the teaching practice. The teaching-learning process entails important responsibilities from the teacher including well-planned classroom management strategies (Faryadi, 2012). Classroom management aims to lead the learners toward better learning opportunities with minimized

presence of misbehaviors (Sieberer-Nagler, 2016). Several studies claimed that there is a positive relationship on the success or failure of the teaching-learning process with the classroom management provided by the teacher (Moore, 2008; Sowell, 2013) and appropriate classroom management techniques ensure the success of the learning process (Gujjar & Naoreen, 2009). Teachers believe that it is the most significant quality that they must possess (Bozkuş & Taştan, 2016).

For the pre-service teachers, classroom management is set on top of their “professional development needs” as neophytes in teaching (Ritz et. al, 2014). According to Emmer & Stough (2001) as cited by Simonsen et. al. (2008), classroom management is an essential part of pre-service teachers’ training. However, classroom management among pre-service teachers may not come easy in beginning teaching. Pre-service teachers tend to become frustrated when dealing with difficult management situations in class (Pellegrino, 2010). Therefore, there is a need to find ways to provide support to pre-service teachers in using effective classroom management techniques (Darney, 2013).

One of the most important roles of the teacher is to appropriately employ classroom management techniques through the awareness of the learners’ learning styles. Though this cannot guarantee greater learner achievement, aligning these learning styles with the teacher’s classroom management strategies claims to be very beneficial towards having a better teaching-learning experience (Gilakjani, 2012). The researcher used the aforementioned studies as basis for the conceptualization of the study. Thus, the researcher uphold the need to support pre-service teachers in providing appropriate classroom management strategies with the components of VAK Model and embedding each part; visual, auditory and kinesthetic, in the development of a toolkit for classroom management.

The process flow of this study adhered to the Analysis, Design, Development, Implement and Evaluate, (ADDIE) model of the Instructional Systems Design. Moreover, the ADDIE model has been known to be an effective approach in developing various instructional products (Aldoobie, 2015) and a well-known framework for research and development (Mayfield, 2011).

In this study, the analysis stage was the beginning of the formulation of the toolkit. During this stage, interviews, observations and researches together with the personal experiences of the researcher about problems of pre-service teachers in classroom management took

place. The analysis stage led to the creating of plan specifying the goals in accordance with the recognized classroom management problems met by early childhood education pre-service teachers.

The design stage of the ADDIE model was the crafting of the visual, auditory and kinesthetic or VAK model-based classroom management toolkit. The identified, analyzed and evaluated classroom management problems of early childhood education pre-service teachers served as basis in designing the toolkit. Each part of the toolkit contained several strategies intended for the classroom management of young learners. The desired toolkit encompassed varied techniques in each area of learning. The contents on the visual preference category were the proposed printed symbolic images for classroom management. In the auditory preference category, the toolkit contained audio compilation, oral statements and objects that produce a sound which can be utilized in managing the class. The last part of the toolkit was the kinesthetic preference. This preference contained simulating activities to manage the class.

The development stage on ADDIE model was the validation of experts of the designed toolkit. This part of the process was essential in order to achieve the desired toolkit. Two experts on the field of research and early childhood education validated and evaluated the classroom management toolkit through answering the researcher-modified Survey/Interview Validation Rubric for Expert Panel (VREP) by Simon and White (2011). Based on the results of the evaluation, the classroom management toolkit was subjected to necessary revisions.

The implementation stage of the ADDIE model followed through after the experts’ validation. The implementation stage began with orientation, preparation and organization of the implementers involved namely: the Kindergarten to Grade 3 pre-service teachers. The researcher oriented the implementers of the toolkit with thorough explanation on each part of the toolkit. The implementers were given the necessary materials needed to achieve the activities on each of the visual, auditory and kinesthetic category. The implementation process lasted until the on-campus training of the pre-service teachers.

The final process in ADDIE model was the evaluation stage which was essential in all aspects of developing the toolkit. The analysis, design, development and implementation stages of the ADDIE model were done with the integration of evaluation. However, the major evaluation happened after the utilization of the

toolkit by the implementers. After the utilization of the implementers of the VAK model-based classroom management toolkit, the researcher-modified Survey/Interview Validation Rubric for Expert Panel (VREP) was used to evaluate the use of the toolkit. The implementers also had statements and suggestions based on their use of the toolkit. The pupils of the implementers, the Kindergarten to Grade 3 pupils had also evaluated the use of the pre-service teachers of the VAK model-based classroom management toolkit with the use of a pictorial Likert scale.

Research Methodology

1. Population and Samples

The participants of the study were chosen through purposive sampling. The researcher included all the pre-service teachers who were assigned in the Kindergarten to Grade 3 classes **in the elementary laboratory school of a State University in Malaybalay City, Bukidnon**. One hundred (100) out of the two hundred thirty-four (234) implementers were identified to evaluate the toolkit using the researcher-modified Validation Rubric for Expert Panel with the criteria, that the implementers had utilized the toolkit many times and that majority of the activities in the toolkit during the process of implementation was utilized. A focused group of twenty-two (22) implementers, who utilized the toolkit in Kindergarten and Grade 3, was formed to distinguish the utilization of the toolkit in the two different levels. Each of the classes from Kindergarten to Grade 3 was well-represented in the conduct of the study. **All the participants of the study were from a State University located in Malaybalay City, Bukidnon, Mindanao, Philippines.**

2. Research Instrument

The process of developing the Visual, Auditory and Kinesthetic (VAK) model-based classroom management toolkit for pre-service teachers had undergone the validity testing of experts in the field of **early childhood education** as well as the members of the panel. **The experts were composed of (1) a seasoned early childhood educator and (2) an English language teacher whose experience lies in teaching young children. The panel members during the research processes of the research were also validators of the toolkit.** The experts and implementers of the study assessed through the researcher-modified Survey/Interview Validation Rubric for Expert Panel (VREP) of Simon and White (2011) **the proposed toolkit.** The pupils of the implementers rated

the toolkit through a pictorial Likert scale of Dickensen, Johnson, and Reynolds-Keefer (2009).

3. Collection of Data

The gathering of data of the desired study had undergone the proper protocol. A letter of intent to the experts and implementers who validated the Visual, Auditory and Kinesthetic (VAK) model-based classroom management toolkit for pre-service teachers had been given. The data gathered through the rating of the researcher-modified survey/interview validation rubric for expert panel (VREP) with comments and suggestions of the two (2) experts in the field of research and early childhood education were set as the reference for revisions of the proposed VAK model-based classroom management toolkit for pre-service teachers.

The comments and suggestions of the implementers were also taken into consideration to fulfill the revision for the final toolkit. Parents consent form was given to the pupils of the implementers, who belonged to the Kindergarten to Grade 3 classes. The pupils rated their overall reaction with the utilization of the implementers of the VAK model-based classroom management toolkit with the use of a pictorial Likert scale.

4. Data Analysis

This study utilized the embedded mixed method research design. This method involved the collection and analysis of both quantitative and qualitative data which are essential in constructing the overall design (Creswell, 2014). The quantitative data were gathered through the use of the researcher-modified Survey/Interview Validation Rubric for Expert Panel (VREP) and pictorial Likert scale. The qualitative data were gathered through the written comments of the experts and implementers. The development of a Visual, Auditory and Kinesthetic (VAK) model-based classroom management toolkit for pre-service teachers was constructed through the presented process flow of the study and the aforementioned design.

Results

Objective No. 1: Formulate Toolkit

The development of the VAK model-based classroom management toolkit for pre-service teachers was guided by the ADDIE model. The analysis done through the observations, experiences and personal ideas of the researcher and compiled researches led to the initial design of the toolkit. The toolkit is divided into three (3) categories namely: visual, auditory and kinesthetic category.

Objective No. 2: Evaluate Toolkit

After the researcher analyzed and designed, the formulated toolkit was subjected to evaluation of experts. These were experts in the field of early childhood education and instructional material making. The experts evaluated and validated the content of the toolkit using the researcher-modified Survey/Interview Validation Rubric for Expert Panel (VREP). Thus, written specific comments and suggestions as regard, content of the toolkit were elicited.

The following summarizes the result of this study:

Table 1. Summary Table from the Implementers' Assessment

Toolkit Content	Mean	Interpretation
7 Rules in Class	3.85	Exceeds Expectations
Positive Classroom Reminders	3.82	Exceeds Expectations
"Untouchable" Rewards	3.75	Exceeds Expectations
"A-10-tion" Chants	3.80	Exceeds Expectations
"Manage Time with a Rhyme"	3.78	Exceeds Expectations
"8t's" Time	3.78	Exceeds Expectations
"Calm Me Down to 10"	3.77	Exceeds Expectations
"Less than a-Minute Breakers"	3.82	Exceeds Expectations
Grand Mean	3.80	Exceeds Expectations

1. All the contents of the toolkit were rated by the implementers as *exceeds expectations*;

Table 2. Summary of Themes from the Comments of the Implementers

Toolkit Content	Themes		
	Effective	Useful	Helpful
7 Rules in Class	53	13	17
Positive Classroom Reminders	16	20	20
Untouchable Rewards	52	10	18
A-10-tion Chants	12	8	14
Manage Time with a Rhyme	9	7	6
8t's Time	15	4	6
Calm Me Down to 10	18	11	6
Less than a-Minute Breakers	3	9	7
Total	178	82	94

2. Majority of the implementers of the toolkit find the toolkit as effective, useful and helpful;

Table 3. Frequency and Percentage on the Pupils' Assessment of the Visual, Auditory and Kinesthetic (VAK) Model-Based Classroom Management Toolkit for Pre-Service Teachers

Range	Description	Frequency	Percentage
3.51 – 4.00	Very Happy	205	74.00
2.51 – 3.50	Happy	41	15.00
1.51 – 2.50	Sad	26	9.00
1.00 – 1.50	Very Sad/Angry	6	2.00
	Total	277	100.00

3. Majority of the pupils of the implementers were very happy with their experience with the toolkit.

In totality, the implementers asserted that the VAK model-based classroom management toolkit as both beneficial to the teachers and the learners. It provides effective classroom management strategies suitable for the diversity of learners' learning styles. The implementer also found the toolkit helpful in the teaching-learning process as shown in these statements:

"overall, the toolkit is a very great idea for classroom management and it can really accommodate both the needs of the teacher and the learners. With the use of the toolkit, it can make the work of the teacher easier... for the learners benefit, the toolkit can accommodate their diversified learning styles and can make learning more fun and educational at the same time."

The foregoing statement of the implementer confirmed the effectiveness of the toolkit in classroom management and it was in consonance with the statement of Padmaja (2012) espousing that an effectively managed class leads to positive educational outcomes.

With the overall results of the written comments and suggestions of the implementers, the researcher found agreement with the postulations of Reupert & Woodcock (2010), stating that a wide range of classroom management techniques is needed to effectively target the variety of the learners' behaviors. The researcher believes that the VAK model-based classroom management toolkit for pre-service teachers has achieved its aim of providing effective, useful and helpful varied classroom management strategies for pre-service teachers.

Objective No. 3: Revise Toolkit

Considering the comments and suggestions of the implementers of the toolkit and the process taken by the researcher with the use of ADDIE model, the final revision of the VAK model-based classroom management toolkit for pre-service teachers was integrated.

With the results of the assessment of the VAK model-based classroom management toolkit for pre-service teachers, the researcher attested the claim of Putman (2009), that providing help and resources in classroom management for pre-service teachers is essential. The results also show that to appropriately employ classroom management techniques in class, the teacher must be aware of the importance of the learners' learning styles (Gilakjani, 2012; Vaisnav, 2013) and when this is done in class, better behaviors would be observed in class (Cotton & Dustova, 2015).

Discussion

Although visual, auditory and kinesthetic (VAK) model of Neil Fleming (2001) was known to be just one of the many learning styles, the researcher believes it is the most suitable model to serve as the anchor of this study. Evidently, there is a positive implication of matching these learning styles of the learners and the classroom management of the teachers in the teaching-learning process. The use of analysis, design, development, implementation and evaluation (ADDIE) model was deemed to be the most appropriate for it clearly directed the process of developing the toolkit. With the developed VAK model-based classroom management toolkit for pre-service teachers being assessed, revised and implemented, the results have shown that the objectives of the study are achieved. The VAK model-based classroom management toolkit is effective, useful and helpful for pre-service teachers.

Suggestions

From the major findings and conclusions of the study, the following recommendations are hereby presented:

1. Higher educational institutions that train pre-service teachers may utilize the developed VAK model-based classroom management toolkit for pre-service teachers;

2. Teachers in early childhood levels may also make use of the developed VAK model-based classroom management toolkit; and

3. Future studies may be planned out for the improvement in terms of more classroom management strategies on the VAK model-based classroom management toolkit for pre-service teachers.

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