

On Infographics in MTB - MLE

Raphael Job R. Asuncion*, Gerald Adelma G. Domingo,
Ricardo N. Ballesteros***, & Melody R. Guzman******

*Faculty of College of Education, Don Mariano Marcos Memorial State University- South La Union Campus,
Agoo, La Union, 2504, Philippines*

ABSTRACT:

Infographics (information graphic) provide visualization of data to the readers using various visuals such as texts, pictures, drawings, diagrams, graphs, etc. This study was conducted to develop infographics in Mother Tongue-Based Multilingual Education (MTB-MLE), particularly in Iloko. A documentary analysis was conducted to gauge the different topics to be included in the development of the infographics and developmental research design was also used in the actual development of the infographics. The results showed that the common topics in MTB-MLE curriculum are community, family, self, sanitation and hygiene, culture and disaster preparedness. It was also found that the developed infographics are very highly valid having the aim or purpose as the most important criteria in the development of the infographics. The evidence from this study suggests that infographics in Mother Tongue-Based Multilingual Education are encouraged to be used.

Keywords: *infographics, instructional materials, mother tongue, MTB-MLE, first language*

INTRODUCTION

The Philippines bids a perplexing milieu for implementing a language policy that can serve the entire nation with its unique archipelagos and distinct native languages throughout the region. Consequently, there are varying language policies in every cohort implemented in the schools over the past hundred years.

The Bilingual Education Policy was challenged by the Department of Education (DepEd) to issue an order that called for the institutionalization of mother tongue-based multilingual education (MTB-MLE). According to Philippines Department of Education (2009), the order entails the usage of the learners 'first language as the language tool in educating for all subject areas Kindergarten up to Grade 3 whereas Filipino and English subjects are taught in the same language. Another issued edict in 2012 was the guidelines on the immersion and embedding of MTB-MLE in the K to 12 Basic Education Curriculum with all the support from the government such as on books, magazines, brochure and others. In addition to shifting toward a K-12 educational structure, this law entails the localization for pre-kinder up to grade three and transitional program for grades 4 to 6, whether regional or local language will be used in teaching, teaching materials, and assessments for. The implementation started 2012 and was done gradually.

DepEd's policy statements about the objectives and outcomes of the MTBE-MLE reform cited the three outcomes which focused on the literacy skills particularly on the speedy reading using their first language; the ability to read and write in the second and third

language faster than those taught using L2 and L3 when a pupil can read and write in L1; and the ability to acquire competencies more quickly.

The 2012 order included objectives that more broadly emphasized the influence of MTB-MLE on four areas of development namely language development, cognitive development, academic development and socio-cultural awareness.

The basis for the espousing MTB-MLE in the Philippines was to upsurge student achievement by concentrating on the development of the cognitive aspects of a child's first language and by means of it as a source for learning L2 and L3 (Filipino and English, respectively) in their far along years. Moreover, the DepEd order (2009) had institutionalized the reflection of the localities' culture, people, events and realities in the instructional materials using the first language. The linking plan outlined plodding operation of the policy over a 3-year period of time to allow time for developing resources and materials, training teachers, gathering required capitals, and launching technical working groups concentrated on MLE.

According to Walter & Dekker (2011), students who are literate in their minority language or their first language had higher academic achievement as compared to students who were literate first in their L2 and L3. This study suggested the establishment of the first language for the easy acquirement of the second and third language. Furthermore, the study pointed out the utilization of mother tongue in late-exit programs up to grade 6 with other subjects taught separately taught using other languages.

According to Güler (2008), the requirement of a thorough selection of useful information is necessary in the increasing intensity of info in the contemporary world and easy access. As to the implementation of the MTB-MLE program of Department of Education, little is shown as to instructional materials and useful information in the resources that cater 21st-century using mother tongue, particularly on the visuals. Visuals are one of the most vital forms of bestowing information. As what Yildirim, Yildirim, Celik, and Aydin (2014), the organization of a situation and information using visual components are the main features of visuals. Graphics are one of the visuals used for the staging of the information. Graphics makes a comparison of the given information and visually present them.

However, nowadays, one effective presentation of one-dimensional information can be presented by the classical graphs. These new materials are tagged as infographics which provide the information to fit within a particular range of points (Krum, 2013). In this way, a few explanations are needed to present a material.

Infographics are presenting info through the help of various visuals and texts in a visual form. Infographics can contain many ingredients such as pictures, graphs, charts, flow diagrams and texts (Krum, 2013). According to Williams (2002), Infographics, as new trends of contemporary learning approach, cover many elements used to envisage the information and allow information to be presented in various visual forms.

In the study of Yildirim (2016), the views of 64 participants including 37 female and 27 male students of Ataturk University, Kazim Karabekir Education Faculty, who used infographics for educational purposes towards educational effects of infographics resulted that infographics are instructive and the preference of usage in the basic learning process are high in particular to educational material, type of infographics, structure, and use of infographics

preferences. Hence, infographics are considered as one of the basic instructional materials and it has been thought that these materials make learning more permanent.

With these, the researchers thought of making infographics in MTB-MLE as a respond to the call of innovative instructional materials using mother tongue.

OBJECTIVES

This study aimed to develop and validate infographics in MTB-MLE for K to Grade 3 of Elementary Laboratory School of Don Mariano Marcos Memorial State University – South La Union Campus.

Specifically, it sought to give answers to the following objectives:

- Assess & identify the learning competencies (topics) based on the curriculum guide;
- Come out with infographics in mother tongue-based on the competencies of K to 12 programs; and
- Validate the produced infographics in the mother tongue.

METHODOLOGY

The study made use of document analysis and developmental research design. The study found out the mother tongue competencies that needed to be elaborated more. Developmental research is a process used to develop and validate educational products, which consists of studying research findings pertinent to the product to be developed.

The data will come from the K to 12 curriculum guide from kinder up to Grade 3 only through a document analysis and from that the development of digital stories through Iloco orthography will be done using Piktochart, a web-based infographic design app that requires very little effort to produce beautiful, high-quality graphics.

The instrument used to gather pertinent data in the study was the curriculum guide and questionnaire on the validity of the infographics in MTB-MLE.

The K to 12 curriculum guide will be analyzed by KH Coder. The infographics in MTB-MLE underwent content validity and face validity a pool of experts. The following scale was used to describe the validity of the instrument:

Weighted Mean	Description
4.20 – 5.00	Highly Valid
3.40 – 4.21	Valid
2.60 – 3.41	Moderately Valid
1.80 – 2.61	Fairly Valid
1.00 – 1.80	Not valid

Based on the result of the validation, the instrument is a well-constructed instrument with the average rating for each that exceeded 2.60. The overall average rating of the instrument is 4.68 which imply that the instrument is highly valid.

RESULTS AND DISCUSSION

Topics Covered in the Development of Infographics in MTB-MLE

Table 1. Topics Covered in the Development of Infographics in MTB-MLE

Topics	Percent
Self	20%
Community	28%
Family	19%
Sanitation and Hygiene	13%
Culture	13%
Disaster Preparedness	7%
Total	100%

It can be seen in Table 1 the topics covered in the development of infographics as per determined using the KH Coder. The community has the highest percentage of analyzed texts which accounts for 28 % whereas the topic on Disaster Preparedness is only 7 % of the total competencies of K to 3 in MTB-MLE. This implies that the curriculum emphasizes more of the topics that concerns community and the involvement of the learners in their environment while a few concerns on the preparation for disasters and calamities maybe due to the fact that the learners are more concerned to be saved rather than to involved in saving others considering their motor skills, alertness level, and their age.

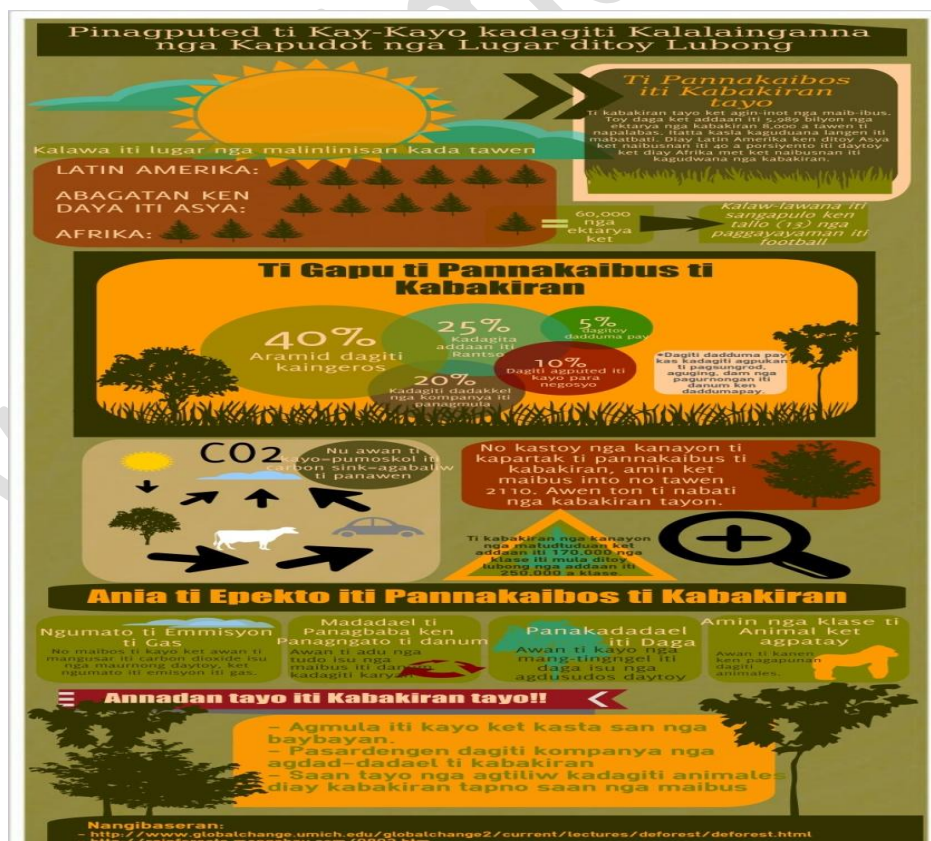


Figure 1. Example of Infographics in MTB-MLE



Figure 2. Another Example of Infographics in MTB-MLE

Validation Results of Infographics in MTB-MLE

Table 2 summarizes the Validation Results of Infographics in MTB-MLE. It can be gleaned from the table that the overall validation rating of the infographics in MTB-MLE is 4.68 which means that the infographics are “Very Highly Valid”. The different criteria namely “Aim” with 4.94; Visual Quality with 4.79; Visualization Level of Information with 4.80; Information Quality with 4.32; Association of Information Visualization with 4.77; Information-Visual Consistency with 4.75; and Typographic Features with 4.40 have a descriptive rating of Very Highly Valid. This implies that the produced infographics are of high quality and are highly recommended to be of used in the class. According to Asuncion (2016), instructional materials should continuously be provided for the students’ holistic development and not to deteriorate the good learning qualities of the students.

Table 2. Validation Results of Infographics in MTB-MLE

Criteria	Mean	Descriptive Rating
Aim	4.94	VHV
Visual Quality	4.79	VHV
Visualization Level of Information	4.80	VHV
Information Quality	4.32	VHV
Association of Information Visualization	4.77	VHV
Information-Visual Consistency	4.75	VHV
Typographic Features	4.40	VHV
Overall	4.68	VHV
Legend: 4.20- 5.00 - VHV (Very High Validity) 1.80-2.59 - NF (Low Validity) 3.40-4.19 - HV (High Validity) 1.79-1.00 - VLV (Very Low Validity) 2.60-3.39 - FV (Fair Validity)		

CONCLUSION

Based on the findings and results of this study, it is concluded that the topics used for making the infographics range from self to community up to the details of their surroundings such as on calamities, and on culture. The topics to be included in the infographics are recommended to accommodate most of the topics in the MTB-MLE Curriculum. Infographics are encouraged to be used in presenting new lessons and information to pupils particularly in their MTB-MLE classes in which it includes pictures, graphs, charts, flow diagrams, and texts. The Department of Education particularly the La Union Division, DMMMSU-SLUC, Elementary Laboratory School teachers, in particular, may consider using infographics in their own MTB-MLE classes.

RECOMMENDATIONS

In making or doing the infographics in MTB-MLE, it is recommended have good features and power of perception that includes the purpose, which should be determined very well and considered in all phases of the design process because it affects all the components; visual quality and visualizing the information, which reflects the information offered properly; the quality of information and consistency with visuals; and typographic components. It is recommended to conduct studies on different groups as to the effectiveness of infographics to the learners. It is also suggested to design experiments to determine the characteristics of a good infographic in MTB-MLE.

REFERENCES

- i. Asuncion, R. J. R. (2016). Effects of ADDIE Model on the Performance of BEED Sophomore Students in the Project-Based Multimedia Learning Environment. *International Journal of Multidisciplinary Approach & Studies*, 3(3).

-
- ii. Güler, T. (2008). Grafik tasarımda yeni bir alanı: Bilgilendirme tasarımı ve bir uygulama (Yayımlanmamış Doktora Tezi). DokuzEylülÜniversitesi, İzmir.
 - iii. Krum, R. (2013). Cool Infographics: Effective Communication with Data Visualization and Design. John Wiley & Sons. NJ. USA
 - iv. Philippines Department of Education. (2009). Institutionalizing mother tongue-based multilingual education (Order no. 74). Pasig City: Author.
 - v. Philippines Department of Education. (2012). Guidelines on the implementation of the mother tongue-based multilingual education (MTB-MLE) (Order no. 16). Pasig City: Author.
 - vi. Walter, S., & Dekker, D. (2011). Mother tongue instruction in Lubuagan: A case study from the Philippines. *International Review of Education*, 57(5-6), 667-683.
 - vii. Williams, F. M. (2002). Diversity, thinking styles, and infographics. 12th International Conference of Women Engineers and Scientists
 - viii. Yildirim, S.(2016) Infographics for Educational Purposes: Their Structure, Properties, and Reader Approaches. *Turkish Online Journal of Educational Technology - TOJET*, v15 n3 p98-110
 - ix. Yildirim, S., Yildirim, G., Celik, E. & Aydin, M. (2014). Bilgi grafiği (infografik) oluşturma sürecine yönelik öğrenci görüşleri, *Journal of Research in Education and Teaching*, 3(4).
-