Development of Mother Tongue-based Early Literacy Assessment Tools for Ilokano Children

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ABSTRACT

This study developed mother tongue-based early literacy assessment tools for Ilokano children. These tools include tests to identify the early literacy achievement of children, such as *Panagilasin kadagiti Letra* (Letter Identification), *Panagbasa kadagiti Sao ken Sinan-sao* (Word and Pseudo-word reading), *Pannakaawat iti Panagbasa* (Understanding about Reading), *Panagsurat kadagiti Letra* (Alphabet Writing), *Panagsurat kadagiti Sao* (Word Writing), and *Panagsurat iti Istoria* (Story Writing).

The research and development (R and D) process was used in this study. It particularly employed Strickland's (2006) ADDIE model: Analyze, Design, Develop, Implement and Evaluate. The Analyze phase included bibliographical research and identification of early literacy achievement of children. In the Design phase, the information gathered were organized as basis in the making of assessment tools, determining how to assess the early literacy achievement of children, and designing the assessment tools in order to capture children's achievement in reading and writing. The Develop phase included the writing, validation and refinement of the assessment tools. In the Implement phase, the assessment tools were tried out and their usefulness were determined.

The assessment tools were found to be highly valid as established by the composite means of the rating given by the validators. The reliability estimates indicated that the assessment tools are very reliable. In general, it was found out that the assessment tools measure what they intend to measure and that they produce very reliable results.

The teachers found the assessment tools to be very useful in identifying what children are capable of doing. Information gathered through the reading assessment tools guide teachers in teaching children how to read and write. It was recommended that the output of this study be disseminated and distributed to reading teachers of the Division of Ilocos Norte and in Ilokano speaking regions in the country.

I. Introduction

The Problem Background Of The Study

The language spoken by the child is a very crucial factor in the development of early literacy. In the years before formal schooling, the child develops his ability to use a language along with literacy. Through a language he is familiar with, the child is able to access the power of education, to develop his self-esteem and pride and his potentials (ID21 Insights, 2006). Children who read and write in the mother tongue before learning another language not only are more successful second language learners but also excel more quickly than their peers who did not become literate in

their first language (UNESCO, 2003). Literacy teaching in the early years of school must be through the language the child knows and uses most often.

Because of the growing number of evidence that the learner's mother language is indeed the best medium of instruction in early years, the Department of Education (DepEd) has institutionalized mother-tongue education as a fundamental educational policy and program in the whole stretch of formal education, including pre-school and in the Alternative Learning System (ALS).

DepEd noted empirical studies like, the Lingua Franca Project and Lubuagan First Language Component Program, showing that learners learn to read more quickly in their first language. The study revealed that pupils who have learned to read and write in their first language learn faster to speak, read and write in a second language and third language than those who are taught in a second or third language first. In terms of cognitive development and its effects in other academic areas, pupils taught to read and write in their first language acquire such competencies more quickly (DepED, 2009).

Among the ten fundamental requirements of MTB-MLE is the development, production and distribution of inexpensive instructional materials in the designated language at the school, division and regional levels with special priority on beginning reading and children's literature. These materials should be, as much as possible, original, reflecting local people and events, realistic, and appropriate to the language, age and culture of the learners (DepEd, 2009).

The planning and implementation of the MTBMLE Program as contained in the said DepED Order include: (1) *Advocacy work and community mobilization;* (2) *Development of a working orthography of the local language;* (3) *MLE orientation and teachers' training;* (4) *Development, printing and distribution of teachers'/facilitators' guides;* (5) *Development of reading materials and other instructional materials;* (6) *Development of assessment tools; and* (7) *Evaluation and monitoring of learning outcomes.*

Item numbers one to five have been undertaken by the Department of Education on a national level. This study covers item numbers six and seven – the development of assessment tools and monitoring of learning outcomes.

In designing and evaluating new curricula, Brandsford, Brown and Cockling (2000) stressed the need to have accompanying assessment tools that teach and measure deep understanding. The design, he said, should engage students' inital understanding, promote construction of a foundation of factual knowledge in the context of a general conceptual framework, and encourage the development of metacognitive skills.

Teachers in the Division of Ilocos Norte who are implementing the MTB-MLE are in dire need of such assessment tools written in the local language they are using in the classroom. There are already available instructional materials. However, there is no Ilokano material yet developed to assess pupils' entry literacy understanding and early literacy achievement along with instruction.

The present study addressed the said concern. The early literacy materials developed are assessment tools to determine the early literacy achievement of children. These tools were designed in consideration of how children think and learn. They were prepared and written to serve as powerful lenses to capture what children can do in reading and writing. These instruments are capable of providing a picture of how the children read and write regardless of the curriculum and the reading and writing activities they went through.

Statement of the Problem

This study developed mother language-based assessment tools to capture the early literacy achievement of Ilokano children.

Specifically, it sought to answer the following questions:

1. What assessment tools could be developed to determine the early literacy achievement of children who are learning to read and write?

2. How valid are the assessment tools as to face and content?
3. How reliable are the assessment tools as indicated by their reliability estimates?
4. How useful are the assessment tools as perceived by beginning reading teachers?

Significance of the Study

Developing materials based on the language the child uses more often is giving respect to the child – respect for his right to be taught in the language that he is most familiar with and respect for his individuality and identity as a person.

As Ilokano children in school learn the basic literacy skills in their native tongue, assessment tools are necessary to determine what they can do so that teachers can provide the opportunities necessary for them to attain what they are capable of doing in terms of reading and writing.

Aside from identifying what children already know which is a means to discover and traverse the unknown, what the child needs to know further are also identified. In other words, the assessment tools could also detect early the literacy learning difficulties of children and could also be used as basis for observing particular difficulties.

These assessment tools could be used as diagnostic, as formative/developmental, and as summative/evaluative instruments. If used at the start of the school year in Grade One, teachers can determine the learner's background knowledge and skills in reading and writing. They could also track children's progress in understanding early literacy concepts. If used at the middle of the school year, teachers could chart children's progress and could plan next steps to improve the latter's performance. And, if used at the end of the school year, teachers can measure children's attainment of early literacy achievement.

With the implementation of the new curriculum for children, the assessment tools can also serve as a lens with which to look closer into the curriculum. They could show the strengths as well as the possible areas for improvement, thus, providing guidance to curriculum planners and implementers to further advance the learnings and insights of children.

More importantly, the assessment tools could be used even if teachers use varied curriculum sequence and design because they generally assess what children can do in reading and writing.

In general, the output of this research is holistic in nature for they could serve as diagnostic, as formative or developmental and as summative or evaluative tools. Researchers may also further venture into the results of this study for broader investigation.

Scope and Delimitation of the Study

The study focused on the development of mother tongue-based beginning reading assessment tools for Ilokano children. It mainly developed assessment tools to capture the early literacy achievement of pupils in beginning reading and writing. The assessment tools were tried out with Grade One pupils of Pasil Elementary School in Paoay, Ilocos Norte and San Nicolas Elementary School in San Nicolas, Ilocos Norte to determine their estimates of reliability.

This study did not venture into standardization and norming as this would be another study to work on.

THEORETICAL AND CONCEPTUAL FRAMEWORK Theoretical Framework
This study endeavored to develop mother tongue-based early literacy assessment tools for Ilokano children who are learning how to read and write. The development of these assessment tools was founded on the principles of mother tongue-based education, the principles of sound assessment and the nature of early literacy achievement.

Mother tongue-based education.
International and local researches recommended the use mother tongue-based education especially in the early years of schooling. It was found out that the use of the learner's first language as the medium

of instruction in the primary years of schooling makes learners better thinkers and better learners in both their first and second languages (Nolasco, 2009). Furthermore, Benson (2004) claimed that children who have the opportunity to learn through their mother language or home language have the best chance of understanding what is taught, making connection between the spoken and written word and participating in their own learning.

No less than the UNESCO also recommended that education is best achieved through ensuring that the child first becomes literate in his mother tongue before attempting to acquire literacy in another language.

Principles of sound assessment. There are three principal characteristics of instruments – the design, technical quality and utility. The design covers the alignment of intents and implies the appropriate scheduling of data gathering. The latter should be based on a coherent set of activities that lead to the adoption and implementation of instruments. Items in the instruments need to be written clearly and that psychometric properties are taken into account. As one of the best practices in instrument selection and development, systematic process of pilot testing is an integral component of the design.

The technical qualities include validity which is defined as the extent to which a measure captures what it is intended to measure, as well as reliability which means the extent to which the use of a measure is a given situation can produce the same results repeatedly. The errors of measurement is defined as the factors that can influence the test results in unexpected ways.

The utility of instruments includes instrument data preparation, reports of test construction practices and instrument accessibility.

All the above-stated criteria are considered in the development of the assessment tools.

Nature of early literacy achievement. The early literacy achievement of children could be identified through observation of how they read and write. Clay (2005) illustrated a theory of reading incorporating the many sources of information in texts which readers

must pay particular attention to in order to achieve successful reading.

The four sources of information are classified into two: the visual and the non-visual (Smith, 1970). The non-visual information are those in the reader's head such as meaning, structure and sounds. The young reader has a stock of knowledge in his brain; he has previous knowledge and information regarding the subject of what he is reading and some concepts about reading itself. Such knowledge aids him as he makes sense of what he is reading. The structure of the language in which the text is written is also important.

The child has language structure in his head which helps him as he reads. This includes knowledge of the language, syntax and grammar. The reader also has stock knowledge on the sounds of the letters, letter clusters and words. These are needed as the child articulates the sounds in the symbol. The visual information or the visual cues are accessed through the eyes with the aid of light. Without light or if the eyes are closed, it is not possible to access this kind of information.

When someone reads, the brain pulls all the information together as indicated by the two way arrows between and among the sources of information. Note that letter-sound and sound-to-letter links are represented by the two-way arrow from the sound box to visual box.

Therefore, every reader has its own unique reservoir of information in his head. In assessing what children know about reading and writing, individual differences as a simple and fundamental principle in education must be taken into consideration. If teaching must start with the students' strengths, assessment tools must be in the language that can truly reveal what those are.

Conceptual Framework

The set of early literacy assessment tools in Ilokano is likened to a triangle (Figure 1). It must take into account three important aspects in its formulation. The base side is the principles of mother tongue-based

education which respect the individuality and nature of the learners. The use of the mother language in beginning literacy is indeed important in the learning of children. As stated by Dumatong and Dekker (2003), by using the students' mother tongue in the classroom to teach literacy, skills as well as subject content, the cognitive skills would be developed and by teaching concepts in the mother tongue, the students would be exposed to comprehensible input and enabled to develop concepts further. This is the reason that the assessment tools are written in Ilokano, the mothertongue of Ilokano children.

The right side of the triangle is the principles of sound assessment which guided the researcher in the making of the assessment tools. These tools are important in any curriculum development, design and evaluation (Bransford et al, 2000). Assessment tools in reading should capture in a way and provide information regarding the four sources of information. In other words, a complete set of assessment tools in reading and writing is capable of making an approximate description of the meaning, structure, sound and visual cues the child has. Furthermore, the assessment tools were developed taking into consideration the principal characteristics of instruments which are the design, technical quality and utility.

The left side of the triangle is the nature of early literacy achievement that defines the content of the assessment materials. With the use of these set of tools, the following questions are addressed: For meaning: Is the child making sense of what he is reading? What concepts about print the child is already familiar with? For structure: Is the language used in the assessment tool comprehensible to the child? And for sound-visual cues: Is the child aware of the sounds of letters, letter clusters and words? Does the child know where to look at? Does he know how a sound is represented in symbols and vice-versa?

Any test for it to be considered powerful must pass through the tests of validity and reliability. They determine if an instrument measures what it intends to measure and if it can produce consistent results. The six assessment tools developed were subjected to face and content validity and Kuder Richardson coefficient of reliability.

METHODOLOGY Research Design

The research and development (R and D) design was used in this study since it aimed to develop mother-tongue based assessment tools for Ilokano children to capture their early literacy achievement. This research design particularly employed Strickland's (2006) ADDIE model. This is a generic and simplified instructional systems design model which stands for Analyze, Design, Develop, Implement and Evaluate.

In the analyze phase, the condition is clarified, the goals and objectives are established, and learner characteristics are identified. The assessment materials are designed and media choices are made in the design phase. In the develop phase, assessment materials are produced according to decisions made during the design phase. The implement phase includes the testing of assessment tools with the targeted audience, putting the product in full production, and training learners and teachers on how to use these tools. The evaluation phase includes both formative and summative which provide opportunities for feedback from the users (Strickland, 2006).

This study considered the first three phases and a part of the last phase of the model to develop early literacy assessment tools. The output of the study through the said phases being undertaken is already a substantial accomplishment. It comprised a creative work undertaken on a systematic basis in order to increase the stock of knowledge (OECD, 2008) on the early literacy achievement of children who are learning to read and write and to devise new measures for assessing what children can do in terms of reading and writing.

Locale of the Study

The study was conducted in the Province of Ilocos Norte, particularly the Department of Education, Division of Ilocos Norte. This Division has 36 secondary schools and 22

districts with 345 elementary schools located in the various towns. Two of these schools are implementing MTB-MLE, one is Pasil Elementary
School in Paoay and the other is San Nicolas Elementary School in San Nicolas.

The Respondents

The assessment tools were designed for children who are undergoing the Ilokano-based instruction. Since these tools are used to determine the early literacy achievement of pupils who are learning how to read and write, the following groups of respondents were selected:

a. For the tryout of the assessment tools, the Grade One pupils of Pasil Elementary School (PES), Paoay, Ilocos Norte for School Years 2010-2011 and 2011-2012; and Grade One pupils of San Nicolas Elementary School (SNES), San Nicolas Ilocos Norte for School Year 2011-2012. The incoming Grade One pupils of both schools were tested on the first four assessment tools: the *Panagilasin kadagiti Letra, Panagbasa kadagiti Sao ken Sinan-sao, Pannakaawat iti Panagbasa* and *Panagsurat kadagiti Letra*. The outgoing Grade One pupils of Pasil Elementary School were tested on the other two assessment tools: the *Panagsurat iti Sao* and *Panagsurat iti Istoria*. The pupil respondents were clustered according to their section.

For every assessment tool, tryout was conducted on two or three randomly selected sections. Such sample clustering was done in order for the children not to experience boredom and that they are not exhausted during the assessment process. This would ensure validity of the data gathered.

For the *Panagilasin kadagiti Letra*, there were 81 pupils who were tested; for the *Panagbasa kadagiti Sao ken Sinan-sao*, 82 pupils; for the *Pannakaawat iti Panagbasa*, 80 pupils; for the *Panagsurat kadagiti Letra*, 98 pupils; and for both *Panagsurat kadagiti Sao* and *Panagsurat iti Istoria*, there were 54 pupils.

Moreover, this study considered the adverse effect of both the "ceiling effect" of the first four assessments and "floor effect" of the last two assessment tools. The former occurs when test items are not challenging enough for a group of individuals, thus, the test score will not increase because the pupils have already reached the highest score that can be achieved on those tests (Bainbridge, 2011). In other words when children have already acquired the basic skills of letter identification their scores cannot go higher. In the *Panagilasin kadagiti Letra*, for example, the highest scores are 28 - 31 such that even a Grade Six pupil will only have a score as high as that. In such case, if the assessment is given to Grade Three or Six pupils the data gathered are not as useful as those taken from Kindergarten or Grade One. The latter occurs when the data gathered are all hitting the bottom end of the distribution due to the extreme difficulty of the task (Everitt, 2002). To use an analogy to explain this, the result of a test on quadratic equation given to Grade One pupils are not worthy to analyze. Due to "floor effect" the *Panagsurat iti Istoria* was not given to incoming Grade One pupils but to outgoing Grade One pupils considering that the former are still learning the very basic skills in writing.

b. For the content validation of the assessment tools, ten validators who are academicians, experts in assessment tools preparation, have experience in supervising/ teaching beginning reading and experts in the Ilokano language.

c. For the perceived level of usefulness of the assessment tools, fifteen beginning reading teachers and the principals of Pasil Elementary School and San Nicolas Elementary School.

Research Instruments

Sets of research instruments were prepared by the researcher. One was a scale to determine the face validity and another one to determine the content validity of the assessment tools which were used by the panel of experts. Each of the assessment tools

was validated to see to it that all the important aspects of early literacy are included and that the tools, as a whole, provide an overview of the early literacy achievement of children.

Another instrument was designed to determine the usefulness of the assessment tools as perceived by the beginning reading teachers and principals who have been implementing MTB-MLE. Their feedback on the administration of the assessment tools is mentioned on the second part of the instrument and the first part is the question on how they could use the information derived from the assessment tools.

Procedure

The first three phases and part of the fourth phase of the ADDIE model were undertaken in this study: 1) the analyze phase, 2) the design phase, 3) the develop phase and 4) the implement phase.

Phase I – Analyze. Two steps were involved in this phase. The first one was the bibliographical research and second was the identification of what children need to learn and what they can accomplish after one to two years of formal schooling.

The bibliographical research included an extensive reading on different reading theories and models. Various reading assessment tools were also reviewed and analyzed. Based from this preliminary research, a concept map was drawn.

The second step included the identification of the early literacy achievement of children who are still learning to read and write including what they can achieve. The information gathered were crosschecked with the Philippine Elementary Schools Learning Competencies for Kindergarten and Grade One.

Phase II – Design. The design phase addressed three steps: 1) organizing the information as a basis in making the assessment tools, 2) determining how to assess the children's early literacy achievement, and 3) designing the assessment tools to capture children's achievement in reading and writing. The information gathered from extensive reading on different reading theories and models were organized in this step. The manner of how to assess the

literacy achievement of children was dealt after. Based from the examination of various reading assessment tools, the output of this study was designed. The design stimulates student initial understanding, promotes construction of a foundation of factual knowledge in the context of a general conceptual framework, and encourages the development of metacognitive skills (Bransford et al, 2000).

Phase III – Develop. Three steps were also undertaken in this phase: 1) the writing of the assessment tools, 2) validation of the tools and 3) refinement of the tools.

The Observation Survey of Early Literacy Achievement (Clay 2005) was the primary basis in writing the assessment tools. Other features of reading tests in English were also noted and adapted. In each assessment tool, the first part gives an overview of the instrument and the rationale behind it. This is followed by the specific objectives, the administration of the tools and the material to be read or to be written. A score sheet accompanies each tool including some materials needed in administering the assessment tool.

The assessment tools were face and content validated using a rating scale devised by the researcher. A panel of experts in assessment, the Ilokano language and reading pedagogy validated each of the assessment tools. Their comments and suggestions were noted and considered in the refinement of the assessment tools. The reliability estimates of the assessment tools were also determined to ensure that they possess the qualities of sound assessment instruments.

As a result of the content validity and reliability testing, the assessment tools were improved especially the *Panagsurat iti Istoria*. Before the revision, children were made to draw something and from their own drawing they made a sentence. They were asked to write their own simple story after. It was found out that there is so much variability on the drawings and stories of children. Likewise, scoring was not consistent and that scores obtained were not fairly compared with other each other.

To improve the assessment, the researcher opted to just present two drawings of children

from which a child will choose. Each of the two pictures has accompanying story which is read by the assessor and which the child will be asked to write. The two sentences have the same structure. Letters and syllables which are scored when written correctly are the same in both of the sentences. This resolved the issue on the comparability of scores.

Phase IV – Implement. Only two steps of the implement phase were undertaken. The assessment tools were administered to Grade One pupils who are undergoing through the MTB-MLE curriculum by their teachers who were oriented on the administration of the assessment tools. They, together with their principals, determined the level of usefulness of the tools in reading and writing.

This study did not venture into the evaluation phase of the ADDIE model as this would require another study.

Statistical Treatment

Frequency count**,** percentage, mean and the Kuder Richardson coefficient of reliability were used in this study.

The observation tools were face and content validated by reading and assessment experts to ensure that the instruments contain all the aspects of early literacy achievement. Validators gave a rating, ranging from 1 (not valid) to 4 (highly valid) on the validity of the instruments. The total mean score were computed and interpreted as follows:

Rating	Mean Range		Qualitative Interpretation
1	1.00 1.49	–	not valid
2	1.50 2.49	–	slightly valid
3	2.50 3.49	–	valid
4	3.50 4.00	–	highly valid

To determine the usefulness of the materials, the teachers provided a rating from 1 (not useful) to 4 (very useful). The mean scores were computed and interpreted as follows:

Rating	Mean Range		Qualitative Interpretation
1	1.00 1.49	–	not useful
2	1.50 2.49	–	slightly useful
3	2.50 3.49	–	useful
4	3.50 4.00	–	very useful

The assessment tools were subjected to further test of reliability estimate using the Kuder Richardson coefficient of reliability.

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

The Early Literacy Assessment Tools

For holistic assessment of reading, a set of assessment tools has to cover and support the cognitive elements involved in reading, such as reading comprehension, language comprehension, decoding, background knowledge, linguistic knowledge, phonology, semantics, syntax, cypher knowledge, lexical knowledge, phonemic awareness, knowledge of alphabetic principle, letter knowledge and concepts about print.

The output of this study is a set of assessment tools written in Ilokano which captures the early literacy achievement of the Ilokano children who are learning to read and write.

The set of assessment tools is dubbed as *Pakabuklan ti Magapuanan dagiti Ubbing iti Panagbasa ken Panagsurat* (Children's Early Achievement in Reading and Writing). It consists of six assessment tools, three each in reading and in writing. The assessment tools for reading include *Panagilasin kadagiti Letra* (Letter Identification), *Panagbasa kadagiti Sao ken Sinan-sao* (Word and Pseudo-word Reading) and *Pannakaawat iti Panagbasa* (Understanding about Reading). The assessment tools in writing are *Panagsurat kadagiti Letra* (Alphabet Writing), *Panagsurat kadagiti Sao* (Word Writing) and *Panagsurat iti Istoria* (Story Writing). A summary sheet for reading and another one for writing are also available to provide an "at-a-glance view" of a child's early literacy achievement.

Face and Content Validity of the

Assessment Tools To determine test validity, the assessment tools were subjected to face and content validation to see if they measure or assess what they purport to measure, and that all the content of early literacy achievement of children are included in the set of assessments. The completeness of the information that may be derived from the tools was also closely considered.

A panel of experts looked into the set of assessment tools. Based on the instrument devised by the researcher, they rated the tools as to the completeness of the contents including page makeup by indicating if they strongly agree, agree, disagree or strongly disagree on the indicators.

Table 1 shows the rating given by the panel of experts on the face and content validity of the assessment tools.

All the assessment tools are highly valid in terms of their face and content validity with composite means ranging from 3.50 to 3.92. The validators believed that through the set of assessment tools, the hidden capabilities of children are discovered through their responses from the instructions and questions contained in the assessment tools. They all agree that the assessment tools measure what they intend to measure.

Table 1. Face and Content Validity of the Assessment Tools.

Reliability Estimates of the Assessment Tools

Assessment Tools	Face Validity	Content Validity
Panagilasin kadagiti Letra	3.54	3.64
Panagbasa kadagiti Sao ken Sinan-sao	3.50	3.58
Pannakaawat iti Panagbasa	3.92	3.80
Panagsurat kadagiti Letra	3.90	3.80
Panagsurat kadagiti Sao	3.85	3.88
Panagsurat iti Istoria	3.67	3.64

Legend: 1.00 – 1.49 not valid
1.50 – 2.49 slightly valid
3.50 – 4.00 highly valid

The assessment tools were tried out to children who are undergoing the MTB-MLE curriculum. The results of the tryout in each of the assessment tools were used to determine the reliability estimates. This was done in order to make sure that the data and information derived from them are reliable.

For all the six assessment tools, since the pupil response for every item is rated as correct or incorrect, which is a dichotomy, the Kuder Richardson coefficient of reliability was used (Educational Resources, 2011). As stated by the Educational Resources (2011) there are generally accepted parameters established in the assessment of reliability: a satisfactory level of reliability is considered when the coefficient falls at the 0.70 level; reliability coefficients above the 0.80 level are considered to be good; coefficients determined to be above the 0.90 level are considered to be excellent.

Table 2 shows the Kuder Richardson reliability coefficient of the assessment tools. The *Panagilasin kadagiti Letra*, *Panagbasa*

kadagiti Sao ken Sinan-sao, Panagsurat kadagiti Letra and *Panagsurat iti Istoria* obtained reliability coefficients above the 0.90 level which means their reliability is very high. The reliability coefficient of *Pannakaawat it Panagbasa* and Panagsurat kadagiti Sao is greater than 0.70 which means the reliability is high.

Assessment Tools	K/n	KR 20 value
Panangilasin Kadagiti Letra (Capital Letters)	81	0.94**
(Small Letters)	81	0.95**
Panagbasa Kadagiti Sao ken Sinan-sao	82	0.96**
Pannakaawat Iti Panagbasa	80	0.77*
Panagsurat Kadagiti Letra (Capital Letters)	98	0.92**
(Small Letters)	98	0.94**
Panagsurat Kadagiti Sao	54	0.79*
Panagsurat Iti Istoria	54	0.90**

Legend: ** very high *high

The KR 20 values of the assessment tools range from 0.77 to 0.96. These reliability estimates are either high or very high which indicate that the assessment tools are reliable. These tools are reliable because the four sources of inconsistencies have been minimized. First, the teachers who administered the test were oriented and that they saw to it that the pupils were conditioned to take the test. Second, the test itself is clear enough because it went through face and content validity. Third, the test conditions were properly set by the assessors, and fourth, the scoring made use of common standards in evaluating responses (Siegle, 2011).

Perceived Level of Usefulness of the Assessment Tools

The study also determined whether or not the assessment tools can be useful to the people who are going to utilize them. The ideas and opinions of beginning teachers are valued for they are the ones who will administer the assessment tools.

After administering the assessment tools and looking into the results, the beginning reading teachers accomplished a researcher-made questionnaire on perceived level of usefulness. Table 16 shows the mean ratings given by the teacher evaluators on the usefulness of the assessment tools.

The teachers themselves perceived the tools as very useful as indicated by the composite mean of 3.68. This result indicates that the assessment tools are specifically useful in diagnosing the early literacy knowledge and skills of children. These guide teachers where to start teaching. Moreover, they could be used to fine-tune or plan lessons in progress and future ones and could provide feedback on what the children have accomplished.

In other words, the assessment tools are very useful and could be of great help to reading teachers, to the pupils themselves and to the teaching learning process.

SUMMARY

This study generally aimed to develop a mother tongue-based early literacy assessment tools to capture the early literacy achievement of Ilokano children. Specifically, it sought to design assessment materials for children who are learning to read and write. These tools were subjected to face and content validity and reliability testing. Their perceived level of usefulness was also determined.

The research and development (R and D) process was used in this study. It particularly employed Strickland's (2006) ADDIE model; Analyze, Design, Develop, Implement and Evaluate. The Analyze phase included bibliographical research and identification of early literacy achievement of children. In the Design phase, the information gathered were organized as basis in the making of assessment tools, processes of assessing the early literacy achievement of children was determined, and the assessment tools were designed in order to capture children's achievement in reading and writing. The Develop phase included the writing, validation and refinement of the assessment tools. In the Implement phase, the assessment tools were tried out and their level of usefulness was determined.

Findings

The set of assessment tools is comprehensive because it is composed of tests on both reading and writing. Specifically it includes tests on letter identification, word and pseudo-word reading, understanding about reading, letter writing, word writing and writing continuous text or story writing.

The following are the six assessment tools with their brief description: *Panangilasin kadagiti Letra* – Pupils identify the randomly arranged capital and small letter by their names, sounds or words that begins with them. *Panagbasa kadagiti Sao ken Sinan-sao* – Pupils decode 40 words and pseudo-words in a list.

Pannakaawat iti Panagbasa – Pupils demonstrate awareness and understanding about various concepts of print and reading.

Panagsurat kadagiti Letra – Pupils write the capital and small letters.

Panagsurat kadagiti Sao – Pupils write as many words as they can in 10 minutes.

Panagsurat iti Istoria – Pupils write a short story or continuous text from dictation.

Based on the content validation made by the panel of experts, the six assessment tools were found to be highly valid.

The *Panangilasin kadagiti Letra* obtained a weighted mean of 3.64 which is highly valid; the *Panagbasa kadagiti Sao ken Sinan-sao* obtained 3.58, highly valid; the *Pannakaawat iti Panagbasa* obtained 3.80, highly valid; the *Panagsurat kadagiti Letra* obtained 3.80, highly valid; the *Panagsurat kadagiti Sao* obtained 3.88, highly valid; and the *Panagsurat iti Istoria* obtained 3.64 which is also highly valid.

The validators believed that through the set of assessment tools, the hidden capabilities of children are discovered through their responses from the instructions and questions contained in the assessment tools. They all agree that the assessment tools measure what they intend to measure.

To determine if the results of the assessment tools are reliable, the Kuder Richardson coefficient of reliability was employed. The reliability estimates of the six tests are either very high or high. Such attest to the fact that the tools are very reliable.

The teachers found the assessment tools to be very useful in identifying what children are capable of doing. Information gathered through the reading assessment tool guide teachers in teaching children how to read and write. In general, they all strongly agreed to the criteria stated with an overall mean of 3.68 which means that assessment tools are very useful.

Conclusions

Based on the findings of the study, it can be concluded that the mother tongue-based early literacy assessment tools which include assessments on both reading and writing such as letter identification, word reading, understanding about reading, alphabet

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writing, word writing and writing continuous text or story writing could determine the early literacy achievement of Ilokano children. The six assessment tools that were developed which are *Panangilasin kadagiti Letra, Panagbasa kadagiti Sao ken Sinan-sao, Pannakaawat iti Panagbasa, Panagsurat kadagiti Letra, Panagsurat kadagiti Sao* and *Panagsurat iti Istoria* are all valid, reliable and useful because their development observed the three principles of sound assessment – design, technical quality and utility. They can also capture the early literacy achievement of children in both reading and writing as described by Clay (2005).

These assessment tools demonstrate a measurement theory that with a valid and reliable instrument one can measure the abilities of individual learners. With such kind of assessments teachers can then progressively modify their teaching accordingly so that the best potentials of children are being developed (Clay, 2005).

Recommendations

Based on the findings and conclusions, the following were recommended:

1. The set of assessment tools should be field tested in a larger scale to further evaluate its usefulness and functionality as diagnostic, formative and summative tool and to establish its norm and standardization.

2. Teachers should see to it that they master each tool before using it with their pupils

3. Teachers should follow strictly the administration of the test as this should be conducted in a standard way.

4. The output of this study be disseminated and distributed to reading teachers in Ilokano speaking regions in the country.

5. School authorities and administrators should encourage the use of these assessment tools for more informed teaching, for monitoring of learning, and for evaluation of performance.

6. Trainings and seminars on the administration of the assessment tools and on the development of early reading and writing materials for Ilokano children must be conducted to teachers and administrators.

7. Researchers should conduct further studies to develop early literacy materials in Ilokano.

REFERENCES

Agcaoili, A. S. (2009). Mother Language Education, Cultural Democracy and Social Justice. A paper presented in Nakem Conference in 2009. University of Hawaii, United States of America.

Bainbrigde, C. (2011). Ceiling effect. Retrieved from About.comGuide in July 2011.

Ballantyne, A., Boocock, C. & Watson, B. (2000). *Letter-sound exploratory project. Interim report to the Reading Recovery Tutors*. Auckland: Auckland College of Education.

Ban, K. (2007). *The millennium development goals report 2007*. United Nations.

Bautista, M.B., Bernardo, A.I., & Ocampo, D. (2008). When Reforms Don't Transform: Reflection on Philippine Education. UP Centennial Lecture. November 12, 2008.

Benson, C. (2004). The importance of mother tonguebased schooling for educational quality. Paper commissioned for the EFA Global Monitoring Report 2005. The Quality Imperative. Retrieved from http://unesdoc.unesco.org/images/ 0014/001466/14663e.pdf.

Bransford, J. D., Brown, A. L. & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school.* Washington D. C.: National

Academy Press.

Cambourne, B. (1988). *The whole story: Natural learning and the acquisition of literacy in the classroom.* Auckland, New Zealand: Ashton Scholastic.

Clay, M. M. (1991). *Becoming literate: the construction of inner control*. Auckland: Heinemann.

Clay, M. M. (2001). *Change over time in children's literacy development*. Auckland: Heinemann.

Clay, M. M. (2005). *An observation survey of early literacy achievement*. Auckland: Heinemann.

Department of Education (2009). Order No. 74. Institutionalization of the Mother Tonguebased – Multilingual Education as a Fundamental Educational Policy and Program in the Department. July 14, 2009. Manila, Philippines.

Department of Education (2011). *Mother Tonguebased Multilingual Education (MTB-MLE), Language Curriculum for Grade 1*. Manila, Philippines.

Department of Education, Culture and Sports (1999). Memorandum No. 144. Lingua Franca Education Project. March 31, 1999. Manila, Philippines.

Dumatong, R. C. & Dekker, D. E. (2003). First language education in Lubuagan, Northern Philippines. Retrieved from http://www.mlephilippines.org.

Dutcher, N. (1994). The use of first and second language in education. A review of international experience. Pacific Islands discussion paper series no. 1. Washington D. C.: The World Bank.

Educational Resources (2011). Retrieved in May 2001 from http://www.edresources.com/.

Flojo, O. O. (2005). *The Nature of Reading*. *English Language Training Program for Elementary Teachers*. Manila: Department of Education.

Gough, P. B. (1972). One second of reading. In J.F. Kavanagh & I. G. Mattingly (Eds.), *Language by ear and by eye*. Cambridge, MA: Mit Press.

Gunigundo, M. (2008), September 06. The right to learn in one's own language. Philippine Daily Inquirer.

Kaye, E. L. (2006). Second graders' reading behaviours: A study of variety, complexity, and change. *Literacy Teaching and Learning*, 10 (2), 51-75.

Kuder, R. (2001). Coefficient of Reliability for Binary Data: Introduction and Explanation. Retrieved from http://www.stattools.net.Kuder_Exp.php.

LaBerge, D. & Samuels, S. J. (1974). Toward a theory of automatic information processing in reading. *Cognitive psychology*. Vol. 6, 293-323.

Maminta, R. (2001). *Tungo sa istandardisasyon ng sistema ng pagsulat sa Filipino*. Manila: Komisyon ng Wikang Filipino.

Id21 Insights (2006). Mother tongue first: Children's rights to learn in their own languages. Vol. 5 (September), 1-2.

The Millennium Development Goals Report (MDG) (2007). United Nations.

New Zealand Ministry of Education (2003).

Effective literacy practice in year 1 to 4. Wellington: Learning Media.

Nolasco, M. N. (2009). 21 Reasons why Filipino children learn better while using their Mother Tongue: A Primer on Mother Tongue-based Multilingual Education (MLE) & other issues on language learning in the Philippines. UP Diliman. Retrived from http://www.mlephilippines.org.

Online Evaluation Resource Library (OERL) (2011).
Retrived in April 2011 from http://oerl.sri.com/.

Organization of Economic Co-operation and Development (OECD) Factbook 2008:

reading model. In Rudell, R. B., Rudell, R. M., & Singer, H. (eds.) *Theoretical models and processes of reading*, 4th ed, Newark, DE: International Reading Association.

SELD Reading Resources (2011). Retrieved in March 2011 from http://www.sedl.org/reading/rad/.

Siegel, D. (2011). Instrument Reliability. Retrieved from http://www.gifted.uconn.edu/siegel/research/In strument.

Singer, H. (1994). The substrata-factor theory or reading. In Rudell, R. B., Rudell, R. M., & Singer, H. (eds.) *Theoretical models and processes of reading*, 4th ed, Newark, DE: International Reading Association.

Smith, F. (1978). *Understanding reading: A psycholinguistic analysis of reading and learning to read, second edition*. USA: Rinehart and Winston

Economic, Environment and Social Statistics.

Pardo, L. S. (2004). What every teacher needs to know about comprehension. Retrieved from http://www.learner.org/workshops/teachreadin g35/pdf/teachers_know_ comprehension.pdf.

Rubino, CR. G. (2000). *Ilocano dictionary and grammar*. USA: University of Hawaii Press.

Rudell, R. B., Rudell, R. M., & Singer, H. (1994). *Theoretical models and processes of reading*. USA: International Reading Association.

Rumelhart, D. E. (1994). Toward an interactive

Strickland A. W. (2008). ADDIE. Idaho State University College of Education, Science, Math & Technology Education. Retrieved from http://edu.isu.ed/addie.

Thomas W. & Collier, V. (1997). School effectiveness for language minority children. Retrieved from http://www.ncela,gwu./pubs/resource /effective ness.

United Nations Educational and Scientific Organizations (2003). Education in a multilingual world.

UNESCO Education Position Paper.

Walter, S., Dekker, D. & Duguiang, N. (2008). The bridge to Filipino and English: third year results of the first language MLE program in the Philippines. Paper presented at the Pascasio lectures, Ateneo de Manila University. September 13, 2008.