# Validation of the general and professional education areas of the college of education's retention examination: Inputs to assessment of learning

Niño B. Corpuz[1], Sheila Marie O. David[2], Jeanette P. Mendoza[3], and Jayson Y. Punzalan[4]

## ABSTRACT

Part of the goals of the College of Education of Tarlac State University is to be recognized by the Commission on Higher Education (CHED) as one of the Centers of Excellence in Teacher Education Program in Region III and in the whole country and to be awarded level 4 program accreditation by the Accrediting Agencies of Chartered Colleges and Universities in the Philippines (AACCUP), Inc. In order to fulfill these noble targets, the college has embarked on the idea of implementing a retention policy to ensure excellent students and competent graduates who are considered to be highly motivated, committed, skilled, research-oriented and globally competitive imbued with positive values. In this regard, this study was conceptualized to validate initially the College Retention Examination (CRE) particularly the subject areas on General Education and Professional Education using content and face validity, item analysis and reliability coefficient. The validation process was a big step to ensuring quality instruction and applying a thorough assessment of learning. The validated CRE would pave the way towards sustaining the standards set by the CHED, AACCUP and other quality assurance agencies in the country as well as international organizations.

*Keywords:* assessment, retention, teacher education, validation

## I.   INTRODUCTION

Education has been one of the major enterprises of a democratic society (Zulueta, 2006). It enables the learner to launch into a lifelong continuum of knowledge, values, attitudes, competencies and skills (Vega, Prieto, & Carreon, 2006). As such, education is a significant part of Philippine life; the teacher is the greatest player and decision-maker in the arena where learning takes place (Rosas, 2010). Consequently, quality appears to be the password in the 21st century, and it is the ascending degree of excellence (Navarro, 2010). Becoming a professional teacher is a lifelong journey with a continuing quest for quality and excellence in education.

CHED Memorandum Order (CMO) No. 30 was promulgated on September 13, 2004 for the purpose of rationalizing the undergraduate teacher education in the country to keep pace with the demands of global competitiveness.

As stipulated in CMO No. 30 series of 2004, quality pre-service teacher education is a key factor in quality Philippine education. In the Philippines, the pre-service preparation of teachers for the primary and secondary education sectors is a very important function and responsibility that has been assigned to higher

1.  ORCID Number: 0000-003-0088-9930, N. B. Corpuz is with the Department of Elementary Education and Graduate School, College of Education, Tarlac State University, 2300, Philippines (e-mail: nbcorpuz_sodu@yahoo.com).
2.  ORCID Number: 0000-0001-9776-6557, S.M. O. David is with the Department of Secondary Education, College of Education, Tarlac State University, 2300, Philippines (e-mail: sheila_david@dlsu.edu.ph).
3.  ORCID Number: 0000-0001-9155-5789, J. P. Mendoza is with the Department of Secondary Education, College of Education, Tarlac State University, 2300, Philippines (e-mail: jeanet_mendoza@dlsu.edu.ph).
4.  ORCID Number: 0000-0002-4110-256x, J. Y. Punzalan is with the Department of Secondary Education, College of Education, Tarlac State University, 2300, Philippines (e-mail: jaysonpunzalan29@gmail.com).

education institutions. All efforts to improve the quality of education in the Philippines are dependent on the service of teachers who are properly prepared to undertake the various important roles and functions of teachers. As such, it is of utmost importance that the highest standards are set in defining the objectives, components, and processes of the pre-service teacher education curriculum.

Consequently, the curriculum of the teacher education program recognizes the need to equip teachers with a wide range of theoretical and methodological skills that will allow options and greater flexibility in designing and implementing learning environments that will maximize their students' learning, once they are in the teaching service.

One of the measures that the College of Education had implemented to gauge students' level of competencies in the field of teacher education is the College Retention Examination (CRE).

The retention policy was approved by the University Academic Council and Board of Regents in 2013 and was first implemented in 2014.

However, the retention examination tool has not been subjected to a comprehensive validation process since the first year of its implementation. It is believed that the quest for academic excellence and effective transfer of learning to students require effective assessment tools that would gauge students' acquisition of knowledge, skills and values. Similarly, the purpose of testing or assessment is to arrive at an educational decision (Gutierrez, 2008).

For that reason, this study aimed to validate initially the existing retention examination tool being used by the college in order to create values of accuracy, appropriateness and efficiency in assessing students' learning and performances in the field of teacher education specifically learning areas General Education and Professional Education.

## II. THEORETICAL FRAMEWORK

Figure 1 presents the research paradigm or conceptual framework which was properly and carefully designed and integrated in the validation process of the college retention examination.

In the figure, the constructed CRE was subjected to a preliminary validation which was conducted by a committee which was composed of specialists in the different subject areas which include experts in the fields of test construction and English language to assess its content and face validity. Primarily, the committee checked the test items if these were related to the subject areas, and the table of specifications (TOS) of the midterm and final examinations submitted by faculty members were also verified as additional mechanisms to ensure the validity of the items. Then,

the test was administered to the College of Education students according to their year levels. Item analysis was done after the administration and scoring of test papers and determined the difficulty index and discrimination index of each test item. Based on the statistical analysis, there were retained, revised and rejected items. Furthermore, the reliability of the CRE was computed using the $KR_{20}$ method.
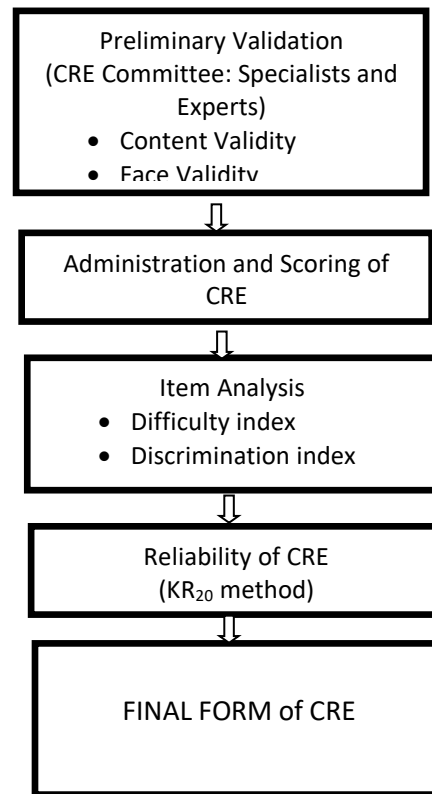


*Figure I.* Research Paradigm

## III. METHODOLOGY

This study utilized the descriptive-developmental method of research. This method is designed to develop and validate educational products (Borg & Gall, 1992). It helped the researchers assess the status of the college retention examination given to students.

Table 1 illustrates the distribution of respondents or total number of takers during the CRE administration for the school year 2016-2017 as the period of concentration for the validation process.

Further, the respondents were selected using purposive sampling. Those who qualified to take CRE 1 were those who passed all the subjects during the the first year. The students who took the CRE 2 passed all the subjects in second year while those who took the CRE 3 passed all the subjects in third year. All students who qualified to take the CRE 1, 2 and 3 were included in the sample.

There were 849 takers in CRE 1, 590 takers in CRE 2 while in CRE 3, there were 379 takers.

Table 1
*Distribution of Respondents*

| Type/ Level of Examination | Total No. of Respondents/ Takers | Total No. of Enrolled Students | % of Respondents | Year Level |
|---|---|---|---|---|
| CRE 1 | 849 | 1156 | 73.44 | Incoming 2nd year |
| CRE 2 | 590 | 740 | 79.73 | Incoming 3rd year |
| | BPE-SPE        =37 | | | |
| | BEED-Gen Ed   =193 | | | |
| | BEED-Preschool =16 | | | |
| | BSIE-Ind Arts  =22 | | | |
| | BSED-TLE       =83 | | | |
| | BSED-Filipino  =37 | | | |
| | BSED-Soc Stud  =28 | | | |
| | BSED-Math      =41 | | | |
| | BSED-Phy Sci   =27 | | | |
| | BSED-MAPEH     =34 | | | |
| | BSED-English   =72 | | | |
| CRE 3 | 379 | 505 | 75.05 | Incoming 4th year |
| | BPE-SPE        = 33 | | | |
| | BEED-Gen Ed   =130 | | | |
| | BEED-Preschool =11 | | | |
| | BSIE-Ind Arts  =17 | | | |
| | BSED-TLE       =22 | | | |
| | BSED-Filipino  =27 | | | |
| | BSED-Soc Stud  =36 | | | |
| | BSED-Math      =28 | | | |
| | BSED-Phy Sci   =21 | | | |
| | BSED-MAPEH     =16 | | | |
| | BSED-English   =38 | | | |

The construction of test items in the retention examination was based on the competencies and content areas as stipulated in the different curricular program offerings of the college and also in the different syllabi or OBTL Guide (Outcomes-Based Teaching-Learning). These test items were carefully selected from the test banks of midterm and final examinations prepared by the subject teachers with tables of specifications (TOS). The preliminary validation was done by the CRE committee which was headed by the Associate Dean who was a specialist in the field of educational assessment or test construction, all area heads who are considered specialists in the different subject areas, program chairpersons of the different departments as well as the College Dean as the consultant.

There were also group of English language experts to ensure the grammatical appropriateness of the whole retention examination.

After the administration of the CRE to qualified students and checking of papers by the CRE coordinators, the test results were collected from the CRE coordinators with the approval of the College Dean for statistical treatment.

The validation process through item analysis was done through the following procedures: (a) The test papers were checked and the scores were tallied and summed up; (b) The test papers' scores were arranged from highest to lowest; (c) The scores belonging to the top 27% were assigned in the upper group while those in the bottom 27% were assigned in the lower group; and (d) The validity of each test item was analyzed based on the computed difficulty and discrimination indices. The difficulty index indicates how easy or difficult the item is while the discrimination index indicates how well the item differentiates the high performing from the low performing students. The difficulty and discrimination indices were computed by two statisticians accredited by the University.

Moreover, an item is within the optimum range if 44.60%-74.59% of the students got the item correctly. An item is easy and very easy if at least 74.60% of the students answered it correctly. On the other hand, an item is hard and very hard if less than 44.60% of the students got the item correctly. The discrimination index differentiates between high performing and low performing groups of students. If the discrimination index is high, at least 0.3, it indicates that the item confirms the good performance of the high performing group compared to the low performing group (Best & Kahn, 1998).

Consequently, the reliability of the retention examination was determined through $KR_{20}$ method. The following was the formula used:

$$KR_{20} = \frac{K}{k-1} \left[ 1 - \frac{\Sigma pq}{(\Sigma \delta^2)^{(1/2)}} \right]$$

Moreover, table 1 illustrates the distribution of respondents during the CRE administration for the school year 2016-2017 as the period of concentration for the validation process.

The personal information or profile of each CRE taker was not disclosed. The study was purely validation of the tool used in the college retention examination through test scores. Thus, the anonymity of students who took the examination was ensured.

The following were utilized for the identification of difficulty and discrimination indices:

Difficulty indices:

| Range | Remarks | Symbol |
|---|---|---|
| 0.00-0.2959 | Very Hard | x |
| 0.296-0.4459 | Hard | √ |
| 0.446-0.7459 | Optimum | * |
| 0.746-0.8959 | Easy | √ |
| 0.896-1.00 | Very Easy | x |

Discrimination indices:

| Range | Remarks | Symbol |
|---|---|---|
| 0.51-1.0 | Very Good | * |
| 0.41-0.50 | Good | √ |
| 0.31-0.40 | Adequate | √ |
| 0.21-0.30 | Poor | x |
| -1-0.20 | Very Poor | xx |

Decision:

| | | | | |
|---|---|---|---|---|
| Retain | *--* | *--√ | √--* | √--√ |
| Revise | *--x | √--x | x--* | x--√ |
| Reject | x--x | *--xx | √--xx | x--xx |

## IV. RESULTS AND DISCUSSION

**Validation of the CRE Preliminary Validation: Content and Face Validity.** The prospective teachers should be well-rounded in their pre-service education which include the completion of general education and professional education courses.

General Education is the educational foundation of knowledge, skills and values that prepares students for success in their personal and professional journey. It also connects disciplinary knowledge and perspectives with the skills needed for lifelong learning beyond the university.

Professional Education is an educational process or program that develops individuals to acquire special competencies for professional practice. It is a formalized approach to a specialized training through which students acquire content knowledge and learn to apply techniques in the teaching profession.

The test items were submitted by faculty members who are teaching the subject areas with tables of specifications (TOS) as utilized during the midterm and final examinations period. Then, the CRE committee which composed of specialists in the different subject areas, experts in the field of educational assessment and test construction. Table 2 presents the subject areas of CRE which were subjected to validation process including the scope or coverage, total number of test items and year level of takers.

Table 2
*CRE Subject Areas for Validation Process*

| Type/Level of Examination | Scope/Coverage | n of Test Items | Year Level |
|---|---|---|---|
| CRE 1 | General Education | 150 | Incoming 2nd year |
| | Science | 30 | |
| | Math | 30 | |
| | English | 30 | |
| | Filipino | 30 | |
| | Social Sciences | 30 | |
| CRE 2 | Professional Education | 75 | Incoming 3rd year |
| CRE 3 | General Education | 50 | Incoming 4th year |
| | Science | 10 | |
| | Math | 10 | |
| | English | 10 | |
| | Filipino | 10 | |
| | Social Sciences | 10 | |
| | Professional Education | 50 | |

The coverage of the CRE was aligned to the curriculum description and competency standards of teacher education program. Article V, section 7 of CMO 30 series of 2004 states that "the curriculum herein is designed to prepare professional teachers for practice in primary and secondary schools in the Philippines".

The design features include various components that corresponds to the basic and specialized knowledge and skills that will be needed by a practicing professional teacher: foundational general education knowledge and skills, theoretical knowledge about teaching and learning, methodological skills, experiential knowledge and skills, and professional and ethical values, and subject matter knowledge appropriate to the level of teaching. Therefore, teacher education encompasses teaching skills, sound pedagogical theory and professional skills.

Furthermore, the content validity of the CRE was ensured by preparing a table of specifications (TOS). The TOS was prepared to ensure that the topics in the different subjects were adequately represented in the CRE. The table of specifications is the design or blueprint that serves as a guide to test constructor in ensuring a valid, reliable and objective test (Palma, 1992).

Moreover, to assess the face validity of the CRE, the draft of CRE was presented to five professors who are experts in measurement and evaluation. Their feedbacks, comments and suggestions were considered in the revision of the draft. Table 3 presents the indicators used by the experts in assessing the face validity of the CRE.

Based from the table, the experts evaluated the suitability of the test items to the subject areas as excellent. Moreover, they assessed the distribution, arrangement and appropriateness of the test items to the level of students as very good. In addition, they also rated the clarity of directions/instructions as very good. Overall, the grand mean of 4.08 indicates that the face validity of the test was very good based on experts' judgment.

Table 3
*Evaluation of Experts*

| Indicators | Mean | Verbal Description |
|---|---|---|
| Suitability of test items to the subject areas | 4.75 | Excellent |
| Distribution of test items | 4.00 | very good |
| Arrangement of test items | 4.00 | very good |
| Appropriateness of test items to the level of students | 4.00 | very good |
| Sufficiency of the explanation of test items | 3.75 | very good |
| Clarity of directions/instructions | 4.00 | very good |
| Grand Mean | 4.08 | very good |

**Item Analysis**. Table 4 illustrates the summary of item analysis in the CRE. Further, there were retained, revised and rejected items along the different learning areas based on the computed difficulty and discrimination indices.

From the table, it is evident that in CRE 1-general education, both retain and revise areas got an equivalent percentage of 22.67 while in the reject area earned a percentage of 54.67. In CRE 2- professional

education, retain area garnered 28%, 46.67% for revise area and 25.33% for reject area. In CRE 3- general education, 22% of the items were retained, 24% items were revised and 54% items were rejected, while in the professional education, 32% of the items were retained, 12% items were revised and finally 56% items were rejected. It indicates that the CRE underwent a scientific method of test construction as each test item was properly analyzed based on the responses of the identified upper and lower groups.

Table 4
*Item Analysis*

| Type/Level of Examination | Scope/Coverage | Total No. of Items | Total No. of Retain Items | Total No. of Revise Items | Total No. of Reject Items |
|---|---|---|---|---|---|
| CRE 1 | General Education | 150 | 34 | 34 | 82 |
| | % | | 22.67 | 22.67 | 54.67 |
| CRE 2 | Professional Education | 75 | 21 | 35 | 19 |
| | % | | 28.00 | 46.67 | 25.33 |
| CRE 3 | General Education | 50 | 11 | 12 | 27 |
| | % | | 22.00 | 24.00 | 54.00 |
| | Professional Education | 50 | 16 | 6 | 28 |
| | % | | 32.00 | 12.00 | 56.00 |

**Reliability of the CRE.** Table 5 shows the reliability coefficient of the CRE by $KR_{20}$ method. $KR_{20}$ is a method of getting the reliability of a test or scale by internal consistency, it is the expected correlation between the item and the total test (Sicat, 2009). From the table, the CRE reached acceptable reliability coefficient in the different levels and learning areas.

Table 5
*Reliability Coefficient of the CRE*

| Type/Level of Examination | Scope/Coverage | $KR_{20}$ |
|---|---|---|
| CRE 1 | General Education | 0.914 |
| CRE 2 | Professional Education | 0.806 |
| CRE 3 | General Education | 0.852 |
| | Professional Education | 0.832 |

In the table, the computed reliability coefficients are the following: 0.914 for CRE 1- general education, 0.806 for CRE 2- professional education, 0.852 for CRE 3- general education and lastly 0.832 for CRE 3- professional education. It signifies that the internal consistency of the CRE along the identified subject areas were within the acceptable and remarkable standard as mentioned by Fraenkel and Wallen (2006).

**Inputs to assessment of learning**. The validated retention examination tool would help the College of Education in producing quality and competent graduates who will perform excellently in the Licensure Examination for Teachers (LET). As such, CRE will be a good training ground for outstanding performance in board examination and all other types of performance assessment. This would also a big help to the college in sustaining the status as Center of Development (COD)

in Teacher Education and hopefully qualify for the higher level as Center of Excellence (COE) in Teacher Education not only in Region III but in the whole country. Furthermore, the validated CRE will magnify the stability, integrity and productivity of the college in instruction, research and extension in consonance with the curriculum content and performance standards of the Teacher Education field as required by the Commission on Higher Education (CHED), Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP), Inc. and other local and international quality assurance agencies. In this sense, according to Defensor (2010), the quality assurance framework for higher education revolves around the three major functions of a university or college: instruction, research, and extension. Monitoring and evaluation mechanisms, public accountability, outcomes and impact on nation-building comprise the key elements of the framework.

The process of assessment does not only entail measuring competencies and skills but also requires giving of feedbacks to those who took the test. The CRE needs to be valid and reliable as the scores it generate becomes the sole basis on the crucial decision on whether to retain students in the college or not. It is designed to discriminate between CoEd students who could handle the academic load in the higher year levels in the courses offered by the college and those who could not by virtue of their scores. Though it may be a little belated to offer but counseling to shift from target teaching career to another of those who failed a valid and reliable CRE may be the necessary feedback they need. With this step, the assessment loop completes its cycle.

## V. CONCLUSIONS

The validated CRE met the requisites for content and face validity as checked and evaluated by specialists in the field of educational assessment or test construction as well as experts in the different subject areas. It means that the goals and objectives of the developed assessment tool are clearly defined and operationalized. The degree in which the test or device is truly measuring what it intended to measure. In the field of educational assessment, validity is an essential component in which the teacher has the responsibility to provide evidence of content relevance and content coverage. Thus, ensuring that an assessment measures what it is intended to measure is a critical component in education.

The CRE had a high internal consistency reliability coefficient. This implies that the items in the CRE measure similar cognitive skills in the Professional Education and General Education subjects.

The validated CRE would serve as an assessment learning tool and a good mechanism to maintain quality students and to produce competent graduates since it underwent the scientific steps in test construction. Supplementary, validity and reliability are fundamentals for educational and psychological measurement, and standards of educational testing. As part of the process, the teacher should identify the knowledge and competencies that are being measured through a valid and reliable assessment instrument. Assessment results are used to identify current knowledge and to predict future achievement.

| | |
|---|---|
| **Originality Index:** | 91% |
| **Similarity Index:** | 9% |
| **Paper ID:** | 930242214 |
| **Grammar:** | Checked |

## REFERENCES

Best, J. W. & Kahn, J. V. (1998). *Research in education.* New Jersey: Allyn & Bacon.

Borg, W. R. & Gall, M. D. (1992). *Educational research: An introduction.* New Jersey: Prentice Hall.

CHED Memorandum Order (CMO) No. 30 (2004). *Revised policiesand standards for undergraduate teacher education curriculum.* Retrieved from http://ched.gov.ph/cmo-30-s-2004/

Defensor, N. P. (2010). Challenges and issues in RP higher education. *21st Century trends, issues and challenges in Philippine education* (95-102). Mandaluyong City: National Book Store.

Fraenkel, J. R. & Wallen, N. E. (2006). *How to design and evaluate research in eduction.* New York: McGraw Hill.

Gutierrez, D. S. (2008). *Assessment of learning outcomes (affective & psychomotor domain).* Malabon City: Kerusso Publishing House.

Navarro, R. L. (2010). Total quality management in graduate teacher education. *21st century trends, issues and challenges in Philippine education* (46-51). Mandaluyong City: National Book Store.

Palma, J. C. (1992). *Curriculum development system.* Mandaluyong City: National Book Store.

Rosas, N. L. (2010). The never-ending quest for quality teaching. *21st century trends, issues and challenges in Philippine education* (156-166). Mandaluyong City: National Book Store.

Sicat, L. V. (2009). *Worktext in research writing.* Tarlac City: Tarlac State University Press.

Vega, V. A., Prieto, N. G., & Carreron, M. L. (2006). *Social dimensions of education.* Quezon City: Lorimar Publishing Co., Inc.

Zulueta, F. M. (2006). *Principles and methods of teaching.* Mandaluyong City: National Book Store.

**AUTHORS**

**Niño B. Corpuz** is married to Aiisa G. Castañeda-Corpuz, an Education Program Supervisor- Science Area of the Tarlac City Schools Division-DepEd Tarlac and blessed with a daughter Nareeya Adriyel C. Corpuz. He obtained the following degrees at Tarlac State University, Tarlac City: Bachelor of Arts in Social Sciences (ABSS) major in Behavioral Studies (Cum Laude), Master of Arts in Education (MAEd) major in Guidance and Counseling and Doctor of Education (EdD) major in Educational Management. He has been a paper presenter in various international and local conferences and conventions related to Social Sciences, Teacher Education and Student Affairs. He is a LET passer with specialization in Values Education in 2004 and a Registered Guidance Counselor in 2008 under the grandfather's clause pursuant to RA 9258. Presently, he is pursuing another master's degree in Education major in Early Childhood Education at Philippine Normal University, Manila.
He served as the Director of Guidance and Counseling Center of Tarlac State University from 2012 to 2014. He is an Associate Professor V teaching General Psychology, Professional Education Subjects, Major Subjects in Pre-School Education and Major Subjects in Guidance & Counseling under the Graduate Program. He is also the Chairman of the Research Unit of the College of Education, Tarlac State University, Tarlac City.

**Sheila Marie O. David** finished her bachelor's degree at Tarlac State University, Tarlac City with the degree Bachelor of Secondary Education (BSED) major in English. She also earned the degree Master of Arts in English Language and Literature (MA-ELLT) at Holy Angel University, Angeles City, Pampanga. Presently, she is pursuing a doctorate degree leading to Doctor of Philosophy in Applied Linguistics at De La Salle University, Manila. She is the Coordinator for CRE 2 of the College of Education, Tarlac State University, Tarlac City.

**Jeanette P. Mendoza** finished the following degrees at Tarlac State University, Tarlac City: Bachelor of Secondary Education (BSED) major in Filipino (Cum Laude) and Master of Arts in Education (MAED) major in Filipino. At present, she is pursuing a doctorate degree in Doktor sa Pilosopiya sa Araling Filipino, Wika, Kultura at Midya at De La Salle University, Manila under the Commission on Higher Education (CHED) Faculty Development Scholarship Program. She is the Coordinator for CRE 3 of the College of Education, Tarlac State University, Tarlac City.

**JAYSON Y. PUNZALAN** is an alumnus of Tarlac State University, Tarlac City and earned the following degrees: Bachelor of Secondary Education (BSED) major in Physical Science and Master of Arts in Education (MAED) major in Physical Science. Presently, he is the college coordinator to the University's Integrated Management System (IMS) and the Assistant Editor of the College Faculty Research Journal. He is the coordinator for CRE 1 of the College of Education, Tarlac State University, Tarlac City.