

# PROFILING THE COMPETENCE OF ALTERNATIVE LEARNING SYSTEM (ALS) TEACHERS TO TEACH A PARTICULAR MATH TOPICS IN HIGH SCHOOL

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**ABSTRACT:** *The teacher is the center of the educative process. Their profile affects their teaching effectiveness. Profiling their competence could help administrators and training providers in making appropriate decisions and actions. The purpose of this paper is to provide a profile of the ALS teachers, particularly, their educational attainment, teaching experience, and mastery of a particular math topic. The survey was conducted personally by the researcher using a survey questionnaire. Out of 52 ALS teachers, 34 voluntarily participated in this study. The data gathered was described and summarized using relative proportions, mean, and standard deviation. Results revealed that none of the participants specialized mathematics or even mathematics-related field, and they are new in the service. Their score on the test on a particular math topic is low, they got only less than half of the item correctly. This implies that the competence of ALS teachers in this division to teach mathematics in the high school level is not enough. Thus, the researcher recommends that ALS teachers may be given a series of training to enhance their mastery of the mathematics content. Also, in hiring ALS teachers, the field of specialization must be considered. Related studies with a large number of participants must be conducted to increase the generalizability of these findings.*

**Keywords:** Profile, competence, educational attainment, teaching experience

## 1. INTRODUCTION

Completion of formal basic education is difficult for many Filipinos. Some stop going to school to work for a living while others do not have access to schools. Basic education means Grades 1-6 and Year 1-4 under the Basic Education Curriculum (BEC), while K-12 in the current educational program. With this, the Philippine government promulgated Republic Act 9155 in 2001 or the Governance Act of Basic Education which provides provisions for Alternative Learning System (ALS) [1].

ALS is a parallel learning system, alternative to the existing formal education instruction which encompasses both the nonformal and informal sources of knowledge and skills [2]. The ALS has two major programs, the Basic Literacy Program, and the Continuing Education Program – Accreditation and Equivalency (A&E). Both programs are modular and flexible. The convenience and availability of the learners are the bases for the schedule of classes. Moreover, the ALS classes are community-based, the teachers are the one to go to the learners' place. Classes are usually conducted at barangay multi-purpose hall, libraries, at home or other learning centers. This learning facilitators, are the mobile teachers, district ALS Coordinators, and instructional managers. The instructional managers are not mobile but the schedule and venue are agreed between the learners and facilitators. The implementation of ALS paved the way for every Filipino to have access to and complete basic education. However, according to Nepomuceno, the Department of Education (DepEd) Undersecretary, the quality of basic education remains low [3]. One of the factors for this low-quality education are the teachers. It is sad to note that the results of the Public Education Expenditure Tracking and Quantitative Service Delivery Study (PETS-QSDS) state that the basic education teachers' knowledge of subject-matter content is poor in most subjects [4]. In the educative process, the teachers are the center. So their competence is linked with students' achievement [5]. The concept of competence can have quite different connotations and definitions [6, 7, 8]. Competence is the effective overall performance within an occupation, which may range from the basic level of

proficiency through the highest levels of excellence [6]. It is a combination of knowledge, skills, attitudes, and experiences [9, 10]. However, one thing common to this notion is that competence is about the qualification and capability of an individual to perform a given role [11].

A competent teacher demonstrates leadership, establish a healthy environment for diverse learners, facilitate students' learning, reflect on their practices, and mastery of the content they teach [11].

Among the above competencies, the most important is the mastery of the subject-matter [12]. The teachers' mastery of the subject – matter is associated with their pedagogical expertise [13]. The teacher who has mastery of the subject matter is able to plan and teach the lesson well. He/she is able to highlight the major points of the lesson and clarify misconceptions [14]. If a teacher is not knowledgeable enough in his/her subject, then our dream of effective teaching is not possible [15].

Furthermore, one cannot deny that mastery of a subject-matter content is defined by educational attainment. Education provides a sound basis for individuals to develop their potentialities [16]. If a teacher specializes in science, then he/she gained more knowledge about science topics. Similarly, If a teacher specializes in mathematics, then he/she gained more knowledge about mathematics topics and the like. Therefore, specialization is important for effective teaching.

Studies also found that teaching experience is positively related to students' performance. Assigning experienced teachers to low performing students is likely to pay off in better performance gaps [17]. Teaching effectiveness increases when teachers accumulate. The more teaching experience the teachers have, the more they support learning [18].

Profiling the teachers' mastery of subject-matter content, educational attainment, and teaching experience would help the administrator of the Department of (DepEd) to come up with appropriate actions when needed. Also, this study provides valuable information to the faculty members of state university offering education program as the DepEd partner in enhancing the quality of teachers. One of the functions of a faculty of a state university is to provide

extension programs to the community. These programs include seminars and training-workshops to the teachers of the department of education. The result resented here help the extensionist to come up with appropriate training design.

## 2. METHODOLOGY

This study used a descriptive quantitative research design. It utilized a survey method to gather the data. The survey was done personally by the researcher. Out of 52 ALS teachers, 34 participated in this study. The respondents were coming from the different districts in the division of Cagayan de Oro City. They answer two parts of the survey questionnaire.

The first part was about their personal information; including their educational attainment and length of teaching experience. The second part measured the ALS teachers' mastery of the select topics in mathematics. This test is a 36-item multiple-choice type. The items of this test were constructed based on the list of competencies in mathematics for ALS K-12 students. The topics are about rational numbers, set, absolute value, integers. The test also contains word problems involving the mentioned topics. The competencies on rational numbers include comparing rational, converting percent to fraction, to decimals, and vice versa. The set topic includes finding subsets, identifying cardinality, and performing operations on set. The absolute value is about performing operations dealing

with absolute values. The competencies covered in integers are performing the fundamental operations. The word problems were limited only to these topics. Each item has one correct answer.

A panel of faculty members of the department of mathematics education in this university validated this instrument. They made few corrections, particularly on the clerical part. The reliability of the assessment result was calculated using Cronbach alpha,  $\alpha = .72$ . This means that there was evidence of internal reliability. If the reliability coefficient is between .50 and .80, the reliability is moderate [19].

The data gathered were summarized using relative proportions, mean, and standards deviation. The relative proportions were used to summarize the educational attainment and the teaching experience of the participants since these data are categorical. The mean and standards deviation were used to describe the participants' score in the mathematics test since these data is continuous. These are the appropriate ways to described and summarized each type of data [20].

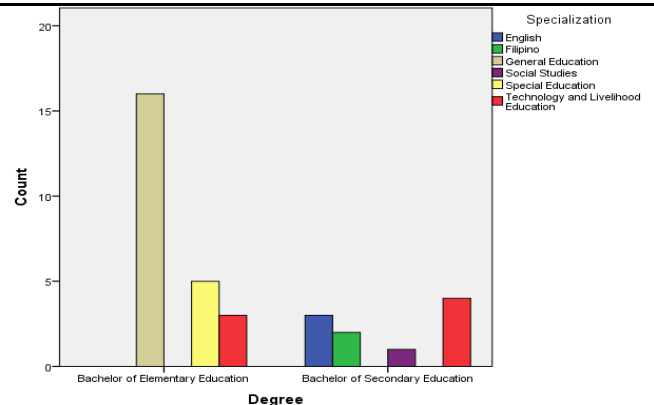
## 3. RESULTS AND DISCUSSION

This section presents the analysis and interpretation of the data obtained from the study.

**Table 1. The degree and specialization cross tabulation**

Degree		Specialization					Technology and Livelihood Education	Total
		English	Filipino	Generalist	Social Studies	Special Education		
Bachelor of Elementary Education	Count	0	0	16	0	5	3	24
	% within Specialization	0%	0%	66.7%	0%	20.8%	12.5%	100%
	% of Total	0	0%	47.1%	0%	14.7%	8.8%	70.6%
Bachelor of Secondary Education	Count	3	2	0	1	0	4	10
	% within Specialization	30%	20%	0%	10%	0%	40%	100%
	% of Total	8.8%	5.9%	0%	2.9%	0%	11.8%	29.4%
Total	Count	3	2	16	1	5	7	34
	% within Specialization	8.8%	5.9%	47.1%	2.9%	14.7%	20.6%	100%
	% of Total	8.80%	5.90%	47.10%	2.90%	14.70%	20.60%	100%

Table 1 shows the degree earned by the participants. It can be noted that none of the participants specialized mathematics or even mathematics-related specialization. More than 70% of the participants earned Bachelor of Elementary education, and most of them are a generalist. For those who graduated in the degree of Bachelor of Secondary Education, the majority are specializing in Technology and Livelihood Education, 40%. This is because the field of specialization is not included in the requirement to be hired as an ALS teacher. The mandated requirement is only teachers' license [21]. The graphical presentation of the participants' educational attainment is shown in figure 1.

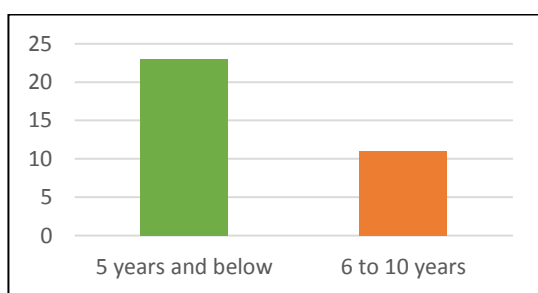


**Figure 1. Bar graph of the participants' field of specialization.**

The teaching experience of the participants was categorized into two levels; 5 years and below and 6 to 10 years. The relative proportions of the teachers belong to each level is shown in table 2, and the graphical presentation is shown in figure 2. It can be seen in Table 2 that the majority are new in a teaching job. Majority of them are in the service for 5 years and below. This is perhaps experienced and more qualified teachers did not apply for this position since ALS teachers are only volunteers. The stipend is not compensating. Each volunteer receives only a maximum of 7,000 pesos including transportation allowance [21].

**Table 2. The relative proportions of teachers belong to each level of teaching experience**

Length of teaching experience	Frequency	Percent
5 years and below	23	67.6
6 to 10 years	11	32.4
Total	34	100.0



**Figure 2. Bar graph showing participants' teaching experience.**

**Table 3. Means and standard deviations of the participants' scores in a particular math topic**

Topic	Mean	SD	Perfect score
Rational Number	3.21	1.04	6
Set	2.50	1.24	7
Absolute Value	3.15	1.65	7
Integer	6.06	1.50	8
Problem Solving	4.47	1.90	8
<b>Overall</b>	<b>19.38</b>	<b>4.72</b>	<b>36</b>

Table 3 depicts the mean and standard deviation of the participants' score in a test on a particular math topic. It can be noticed that most of their scores is 5 topics included in the test is less than half of the perfect score. The topic which they got high is an only integer, 6.06 out of 8 or around 76%. This result is a manifestation that the participants' knowledge in mathematics is limited. This supports the report World Bank Group and Australian Aid [4] and the statement of DepEd undersecretary [3].

**4. CONCLUSION AND RECOMMENDATIONS**

The ALS teachers in this division do not specialize in mathematics, and their teaching experience is raw. They do not have mastery of the mathematics content. Thus, the researcher concluded that majority of the ALS teachers in this division are not competent enough to teach mathematics in the high school level. As a result, the researcher recommends that ALS teachers may be given a series of training to enhance their mastery of the mathematics content. Also, in hiring ALS teachers, the field of specialization must be considered. Related studies

with a large number of participants must be conducted to increase the generalizability of these findings.

**5. REFERENCES**

- [1] *Governance of Basic Education Act of 2001*. Philippines, 2001.
- [2] D. J. C. Tindowen and J.-A. Bassig, John Michael; & Cagurangan, "Twenty-First-Century Skills of Alternative Learning System Learners," *SAGE Open*, 2017.
- [3] N. Alcober, "Quality Education," 2018.
- [4] World Bank Group and Australian Aid, "Assessing Basic Education Service Delivery in the Philippines. The Philippines Public Education Expenditure Tracking and Quantitative Service Delivery Study," 2016.
- [5] D. O. Fakeye, "Teachers' Qualification and Subject Mastery as Predictors of Achievement in English Language in Ibarapapa Division of Oyo State Teachers Qualification and Subject Mastery as Predictors of Achievement in English Language in Ibarapapa Division of Oyo State," *Glob. J. Hum. Soc. Sci.*, vol. 12, no. 3, 2012.
- [6] G. E. Cheetham, Graham; and Chivers, *Professions, competence and informal learning*. Edward Elgar Publishing, 2005.
- [7] M. Van Merriënboer, J. J. G., Van der Klink, M. R., & Hendriks, "Competenties: Van complicaties tot compromis [Competencies: From complications to compromise]. Den Haag, The Netherlands: Onderwijsraad," 2002.
- [8] W. Westera, "Competences in education: a confusion of tongues," *J. Curric. Stud.*, vol. 33, no. 1, pp. 75–88, 2001.
- [9] E. Commission, "Supporting Teacher Educators for Better Learning Outcomes," 2013.
- [10] S. G. Poro, A. P. Yiga, J. C. Enon, F. Mwosi, and M. Eton, "Teacher competence and performance in primary schools in Nwoya District, Northern Uganda," *Int. J. Adv. Educ. Res. Int.*, vol. 4, no. 1, pp. 3–8, 2019.
- [11] O. Nessipbayeva, "The Competencies of the Modern Teacher," *Bulg. Comp. Educ. Soc.*, pp. 148–154, 2012.
- [12] M. M. I. Akpan, O. E., Essien, E. E., & Obot, "Teachers' level of mastery of subject matter and students' academic achievement in Social Studies in Cross River State," *West African J. Educ. Res.*, vol. 11, pp. 11–17, 2008.
- [13] L. Darling-Hammond, "Securing the right to learn: Policy and practice for powerful teaching and learning," *Educ. Res.*, vol. 35, no. 7, pp. 13–24, 2006.
- [14] L. N. Kamamia, N. T. Ngugi, and R. W. Thinguri, "To Establish the Extent to which the Subject Mastery Enhances Quality Teaching to Student-Teachers During Teaching Practice," *Int. J. Educ. Res.*, vol. 2, no. 7, pp. 641–648, 2014.
- [15] B. Kimberly, *Characteristic of effective teachers*. USA: Edu books, 2009.

- [16] H. I. Akinwumi, F. S., & Adeyanju, "A post-training job performance of sandwich and full-time Nigeria Certificate in Education graduates in Ogun State, Nigeria," *Pakistan J. Soc. Sci.*, vol. 8, no. 2, pp. 94–99, 2011.
- [17] B. A. Adegbile, J. A., & Adeyemi, "Enhancing Quality Assurance through Teachers' Effectiveness," *Educ. Res. Rev.*, vol. 3, no. 2, pp. 61–65, 2008.
- [18] A. Kini, Tara; & Podolsky, "Does Teaching Experience Increase Teacher Effectiveness? A Review of the Research," 2016.
- [19] M. Salvucci, S., Walter, E., Conley, V., Fink, S., & Saba, "Measurement Error Studies at the National Center for Education Statistics.," 1997.
- [20] C. Dewberry, *Statistical Methods for Organizational Research Theory and practice*. New York, NY: Routledge, 2016.
- [21] L. M. Briones, "Department of Education," *In order to qualify and avail of this benefit, all MTs and full-time DALSCs are required to enlist at least 75 learners for Nonformal Education (i.e Basic Literacy Program or Accreditation and Equivalency Program) excluding enrolees of Informal Education*, 2016. [Online]. Available: <http://www.deped.gov.ph/2016/09/02/do-59-s-2016-amendment-to-deped-order-nos-59-s-2012-19-s-2013-17-s-2014-and-17-s-2015-3/>.