



Content Knowledge on the Highlights of the K to 12 Curriculum Implementation: Basic for a Proposed Development Plan

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Abstract

Teachers as a steward for cognizant transformational change must continuously upgrade their personal growth and professional development. The need to optimize competency-based teacher standards in order to carry out a high performance of their roles and responsibilities as a key to realize the imperatives of the K to 12 curriculum program brings focus in this study. The study assess the content knowledge on the highlights of the K to 12 curriculum implementation of the Technology and Livelihood Education (TLE) teachers of General Emilio Aguinaldo National High School. The study was purposively involved 31 teachers using the descriptive-quantitative research design with the support of the focus group discussion. A validated researcher-made questionnaire with corresponding arbitrary scale and verbal interpretation was used in the study. The findings of the study revealed that only 71 % were able to attend K to 12 seminars/training, 52 % have a Master degree, 3 % have a Ph.D. and 45 % are less than three years in service. It was also revealed that teachers had a satisfactory level of content knowledge on the pre-assessment with a mean of 3.08 or 77 % indicative level of awareness. The in-service training program through capacity building highly improved teacher's content knowledge with a mean of 3.79 or 94.75 % indicative level of awareness. Thus, the in-service training program that responds to teachers' competency needs standards was deemed effective in intensifying content knowledge of the TLE teachers of the current development in education. The study suggests to sustain the proposed development plan in initiating seminar, training, and assessment regardless of curriculum reform to further upgrade teacher's competence.

Introduction

Department of Education Basic Education System Reform Agenda considered the K to 12 curriculum as the flagship reform initiatives that will produce ideal graduates who are more productive and effective people

geared with essential knowledge and skills for life-long learning. The empirical initiatives of Basic Education Reform Agenda (BESRA) are the creation of the National Competency-Based Teacher Standards (NCBTS). In response to the need, DepEd continuously used

National Competency-Based Teachers Standards – Teachers' Strength Needs Assessment (NCBTS-TSNA) as an instrument to identify the professional strengths, current competencies and the development of teachers to address teachers need assessment.

The Philippine Department of Education believes that transforming the basic education system will improve education outcomes. Cruz (2011) stated that the K to 12 curriculum program must adequately respond to local needs while allowing graduates to maximize job opportunities beyond boundaries by reducing jobs-skills mismatch and better preparation for higher learning and achieve education for all. But issues and challenges exist in the Philippine education to upgrading teachers' competence in teaching the new curriculum. A major reform movement has placed accountability on the shoulder of the K to 12 teachers' commitment to structure content knowledge on the curriculum for democratic education teaching practice while fostering their awareness on the guidelines and implementing rules and regulations on the curriculum (Chang, 2005). The reform faces challenges in redesigning the curriculum, in deploying and training teachers at the start of the program's implementation, in ensuring the sustainability of the program, and in meeting the required infrastructure (Sergio, 2012). Collaborative professional development such as in-service training has the potential in promoting inquiry-based on developing a more in-depth understanding of the nature and processes of the curriculum which are often unsustain (Lee, 2011). As emphasized by Braza & Supapo (2014) the problems encountered in the implementation of the K to 12 curriculum is the lack of training, seminar and unclear standard operating procedures. Since teachers still found difficulty in adhering to the standards and principles of the K to 12 curriculum in the Philippines. A major challenge was in supporting teachers in mastering a new curriculum and introducing student-centered inclusive pedagogy. According to Torres (2014) there is a significant gap between the competency level and the anticipated competency standard of TLE teachers of the Division of Imus City particularly on the teaching pedagogy that foster motivation and opportunity for students that would enhance their competency; transform professional oath and revitalize unparalleled nobility.

Personal Growth and Professional Development – domain seven of NCBTS-TSNA consolidated report of teachers assessment of TLE Department reveals that building professional links with colleagues to enrich

teaching practices particularly at the level of keeping abreast with recent development in education received the third-lowest performance indicator. Basic Education Reform Agenda created NCBTS-TSNA as part of policy reforms of DepEd pursuing a package of reforms that seeks the quality of basic education. These policy reforms are expected to create the crucial changes necessary to further accelerate, broaden, deepen and sustain the improved effort already started (DepEd-BESRA). Aquino (2015) stressed that far from being a quick fix to our laggard status, the K to 12 programs were carefully studied and designed by both private and public education stakeholders based on research from other countries and our own local successes and failures in education. According to Vernez, Karam, & Marshall (2012) the process of development gave the authority for schools to arrange, improve or develop, assess and evaluate their curriculum by considering social, cultural, financial and local potentials as well as society needs and other results of the different aspects which pertains to performance indicators of the schools that affect the education process, performance of the teachers and students. Teachers as agent for transformational change must demonstrate a deep understanding of the highlights of the K to 12 curriculum. Therefore, the Department of Education must assure that the K to 12 teachers must be fully aware of the highlights of the new curriculum design. Despite the reform strategy of the Department of Education, the question still remains: Are the K to 12 teachers able to demonstrate an understanding of such change of the current development in education? Presently, K to 12 curriculum is running after and the Department of Education continuously improves the system for the welfare of the teachers.

To continuously elevate teachers' knowledge and skills, an annual assessment is conducted. The consolidated report on national competency-based teachers' standards of performance appraisal of TLE teachers which reflects on the TSNA report performance indicator uncovered the needs to intensify teacher's content knowledge. This framework establishes the competency standards for teachers' content knowledge on the curriculum. This complex set of knowledge, skills, and attitudes that each teacher must possess in order to demonstrate the adequate performance of their duties and responsibilities. In connection with the implementation of the K to 12 curriculum, it can be said that the performance of the students reflects the performance of the teacher and the school as a whole.

This study aims to assess the content knowledge of the TLE teachers regarding the highlights of the K to 12 curriculum. It will enable school managers to understand the current status of the K to 12 teachers regarding level of awareness on the content and underlying principles of the K to 12 curriculum program. The purpose of this study wanted to determine the demographic profile of the TLE teachers and to assess their level of awareness on the content knowledge on the highlights of the K-12 curriculum implementation before and after the in-service training program. Thus, it will serve as reference point for continuous improvement and to the proposed development plan towards the attainment of the overarching goal of the implementation of the K to 12 curriculum framework of TLE components in General Emilio Aguinaldo National High School.

Research objectives

In this context, the research aims to determine the content knowledge of the TLE teachers on the highlights of the K to 12 curriculum implementation in General Emilio Aguinaldo National High School. Specifically, it sought to answer the following questions:

1. What is the demographic profile of the respondents In terms of K to 12 seminars or training attended; educational attainment; and years in service in the public school?
2. What is the level of content knowledge of the teachers on the highlights of the K to 12 curriculum before and after attending in-service training program?
3. Based on the findings, what development plan could be proposed for teachers to enhance content knowledge on the K to 12 curriculum program implementation?

Conceptual framework

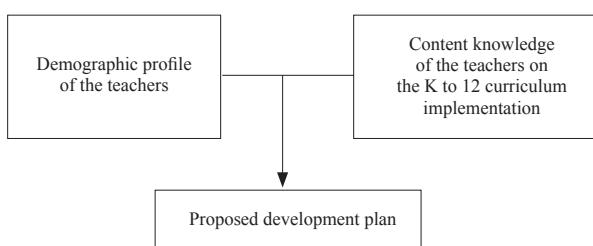


Figure 1 Content knowledge on the K to 12 curriculum implementation assessment

Research methodology

The study used the descriptive-quantitative design of research with support of the focus group discussion. Descriptive research may be defined as a purposive process of gathering, analyzing, classifying, and, tabulating data about prevailing conditions, practices, beliefs, processes, trends and cause-effect relationship and then making an adequate interpretation about such data (Calderon & Gonzales, 2012).

The sample of the study purposively includes 31 K to 12 teachers from different learning sectors and grade levels in Technology and Livelihood Education Department of General Emilio Aguinaldo National High School during the school year 2016-2017. The K to 12 program implementation focuses on major transformation on the TLE curriculum, this study involves the TLE teachers.

A researcher-made questionnaire was used in the study that was validated by the officer-in-charge and education program supervisor of TLE. The questionnaire composed of 15 essential elements of the curriculum implementation in TLE. To measure the internal consistency of the questionnaire, a Cronbach alpha reliability test using the nominal data was used that conforms the high positive correlation of 0.90.

A pre-assessment questionnaire was given to determine teacher's content knowledge on the highlights of the K to 12 curriculum implementation before the in-service training. The topic was embedded in the in-service training program deals with keeping abreast with recent development in education since this indicator was among the top 3 lowest performance indicator of TLE Department. It serves as an intervention in response to teachers' need assessment consolidated report of the NCBTS appraisal of TLE Department from the academic year 2015 up to 2017. The in-service training program was conducted during the last week of October. Right after conducting the in-service training program, post-assessment was given to the teachers which encompass the content and underlying principles of K to 12 curriculum to further determine the present status regarding the content knowledge of the TLE teachers on the highlights of the K to 12 curriculum implementation. A synthesize focused group discussion was also part of gathering information during the seminar in order to strengthen the data according to the perspective of the teachers in the implementation of the K to 12 curriculum.

The study used frequency distribution to describe the demographic profile of the respondents and average

mean to describe the level of content knowledge using the 4 point Likert scale with corresponding verbal interpretation: (3.26 - 4.0 - High, 2.26 - 3.25 - Satisfactory, 1.76 - 2.25 - Fair, and 1.0 - 1.75 - Low).

Thus, a proposed development plan aims to enrich teachers' professional standards in the implementation of the TLE K to 12 curriculum towards the continuous personal growth and professional development.

Results and discussion

In terms of respondents' demographic profile, 22 or 71% were able to attend K to 12 seminars/training. Therefore 9 or 29% of the respondents were not able to attend K to 12 seminars and were not totally oriented on the highlights of the K to 12 curriculum implementation; 16 or 52% of the respondents received Master degrees, 1 or 3% received a Ph.D. The majority of the respondents are less than 3 years in service with percentage distribution of 45%. Regardless of the demographic profile, the respondents must be fully aware of the imperatives of the K to 12 curriculum implementation and highlights of the new curriculum, teachers must evidently demonstrate an understanding of the content and underlying principles of the K to 12 curriculum. Research confirms that teachers' quality is one of the most important factors influencing student achievement and the performance of the school as a whole. Particularly, Talon (2014) stressed that teachers should upgrade their technical knowledge in the field of teaching TLE and should attend more seminars, workshops and other activities that may lead to competent teachers. Moreover, the knowledge, skills and attitude of the teachers are significantly different in relation to their motivation and self-efficacy (Torres, 2014). A continuous capacity building is a key for development, accessibility and inclusion of providing quality education for all. Teachers' transformation, in terms of their content knowledge in the implementation of the new curriculum is vital to carry out meaningfully their roles and responsibilities. Durban & Catalan (2012) stressed that part of the teachers' transformation must include upgrading and updating professional and personal development.

This implies that teachers' professional needs should respond to emerging changes in the recent development of the new curriculum in order to maximize such competency standards that will improve school performance indicators. It can be said that educational policies should encourage school leaders to support

teachers to demonstrate an understanding on the framework of the K to 12 curriculum and to maximize curriculum support system synergism and intensify students learning performance.

Table 1 Level of content knowledge of TLE teachers on the highlights of the K to 12 curriculum implementation before and after the in-service training program

No.	Curriculum Highlights	Mean (Before)	Verbal Interpretation	Mean (After)	Verbal Interpretation
1	Republic Act 10533	2.77	Satisfactory	3.84	High
2	Standard and principles in developing the enhanced basic education curriculum	3.26	High	3.71	High
3	Overall goal of the K to 12 curriculum	3.32	High	3.87	High
4	The K to 12 Philippine basic education framework	3.13	Satisfactory	3.77	High
5	Four areas of 21st century skills	3.00	Satisfactory	3.65	High
6	Important components of the curriculum	3.06	Satisfactory	3.70	High
7	Principles of the curriculum	3.00	Satisfactory	3.77	High
8	Salient features of the curriculum	3.06	Satisfactory	3.61	High
9	K to 12 curriculum model	3.19	Satisfactory	3.90	High
10	The Philippine qualification framework	3.13	Satisfactory	3.77	High
11	The conceptual framework of teaching the TLE	3.13	Satisfactory	3.90	High
12	Content standard, performance standard and learning competencies	3.23	Satisfactory	3.94	High
13	Phases of strategic learning in TLE	3.10	Satisfactory	3.87	High
14	P4A model in teaching TLE	2.77	Satisfactory	3.81	High
15	Facet of understanding	3.13	Satisfactory	3.81	High
Average		3.08	Satisfactory	3.79	High

Legend: 3.26 - 4.0 - High, 2.26 - 3.25 - Satisfactory, 1.76 - 2.25 - Fair, 1 - 1.75 - Low

Table 1 shows the result of the survey before attending in-service training regarding teachers' content knowledge on the highlights of K to 12 curriculum implementation. The overall mean obtained was 3.08 or 77% index of awareness, which is interpreted as satisfactory. Out of 15 indicators, the highest mean score was obtained by indicator 3, teachers are aware of the overall goal of the K to 12 curriculum; and indicator 2, teachers are aware of the standards and principles in the enhanced basic education curriculum with a mean of 3.26 and 3.32. The table also statistically shows that the majority of the respondent's content knowledge at a satisfactory level which can be described as a limited extent with a mean within 2.77 to 3.24. Item 1 and 14 are indicators obtained by the respondents with the lowest mean score of 2.77 that refers to knowledge of the Republic Act 10533 as the fundamental basis of implementing the curriculum and likewise, the P4A

model as the strategic learning procedures of teaching the lessons in TLE as prescribed by TESDA.

The finding of the study is in consonance with the status implementation of basic education program that was evident in 19 schools in region IV-A, issues such as streamlining teachers competency to subjects being taught, lack of classrooms according to K to 12 standard size, lack of adequate resource materials and equipment needed for the implementation of the K to 12 curriculum are considered as an existing challenge in Philippine schools (Lucban, 2017; Osmeña, Nama, & Ulpina, 2016; Sergio, 2012). For better information dissemination about the new curriculum and for a realistic implementation plan, strong curriculum support must be evident as well (Reyes & Martin, 2016). This implies that capacity building and partnership between school-community and stakeholders must establish synergism for the provisions and upgrade of essential material and human resource capital.

The table also presents the results of the assessment of survey after the in-service training that pertains to teachers' content knowledge on the highlights of K to 12 curriculum implementation. The overall mean score of the respondents in the post-assessment was 3.79 or 94.75 % index of awareness, which is interpreted as high. The results reveal that respondents achieved all 15 indicators to a great extent with a mean within 3.61 to 3.94. The highest mean score is obtained from indicator 12, teachers are aware of the content standard, performance standard and learning competencies as prescribe by DepEd in the TLE curriculum.; followed by item 9, which disclosed that teachers are totally aware of the K to 12 curriculum model; and item 11 which described that teachers are cognizant about the conceptual framework of teaching the TLE with a mean of 3.90.

Meanwhile, the top 3 lowest mean score in the post-assessment is 3.61, interpreted as high also are obtained by item 8, teachers awareness on the salient features of the curriculum; followed by item 5, teachers awareness on the four areas of 21st-century skills with a mean score of 3.65 and item 2 and 6, both with a mean of 3.71, teachers awareness on the standard and principles in developing the enhanced basic education curriculum and important components of the curriculum. The same was done in other indicators obtained a mean within 3.77 to 3.87, which is interpreted as high.

Macalindog & Miraña (2016) and Cruz (2011) reiterates that teachers must be fully aware of the implementing guidelines of the curriculum and to have

regular assessment that will serve as a ground to intensify their professional growth and development. The K to 12 curriculum teachers that possess attributes and skills of a 21st century teachers often have better performance (Riego de Dios, Olonan, Melo, & Asio, 2016). This implies that the in-service training regarding the consolidated TSNA results of the teachers should be incorporated during the capacity building seminars that continuously adhere to the teachers' development plan.

Focus group discussion

To further strengthen and support the findings on the assessment, a focus group discussion was conducted.

The teachers' perspective to the implementation of the K to 12 curriculum expected the 100 % assurance on the alignment of competency to the subject being taught with the provision of the learning module and teacher guide to all learning areas to be offered in school. To provide course offering that is streamlined to the elective specialization courses to the course in senior high school. A continuous capacity building seminar, training, workshop and acquisition of national certificate levels and trainers' methodology to all TLE teachers across different components. Provisions and procurement of necessary tools and equipment for the elective course in TLE and enhance further pedagogic approach in teaching TLE to elevate the national achievement level.

According to Nicolas (2017) a harmonized standards would facilitate mobility of human resource and promote the adoption of best practices on standards and qualification in associated in qualification reference framework inline to TLE curriculum. Pascua & Viñegas (2017) reiterates that school administrators must observe the needs of the teachers, as to plan programs such as seminars and training that fit teachers' needs. It denotes to address the urgent needs to equip K to 12 schools with essential instructional materials, tools, and equipment as fundamental to successfully implement the curriculum. Hence, with the combined teacher's content knowledge with align competencies and sustainable policy on the implementing rules and regulation of the K to 12 curriculum, an ideal transformation is achievable.

Proposed development plan

1. Goal: TLE teachers should demonstrate a high level of content knowledge and technical competencies on the standards of personal growth and professional development inline to the recent development of education.

Table 2 Proposed development plan

Area	Specific objectives	Strategies	Performance indicator	Time Frame	Responsible person	Budget
Highlights/ imperatives of the K to 12 curriculum	To keep updated with the recent development of curriculum and enhance teachers' 21 st century skills through In-service training and National Certification from TESDA	Provide sustainable support about conducting training, seminar, mentoring, and coaching teachers knowledge and skills on the 21 st century competencies Send teachers in acquiring competency assessment certificate to upgrade technical competence	100% of the teachers should have enhanced the 21 st century skills and content and performance standard of the curriculum Increased awareness of the highlight of the K to 12 Curriculum and obtained National Certificate from TESDA (NC and TM)	April to May	- EPS - Principal, - Head Teachers, - Master Teachers, - Teachers	- MOOE Fund - Dept. Fund - Personal
NCBTS-TSNA/ RPMS	To enhance teachers' competency standards regarding TSNA consolidated results and or RPMS evaluation within their respective performance needs assessment	Consistent and sustainable In-service training program Conduct seminar-workshop related to TSNA/RPMS report	100% of the teachers should have attended a necessary In-service training program All teachers should have attended required seminars, training and workshops	April to October	- EPS - Principal - Head Teachers - Master Teachers - Teachers	- MOOE/ Dept. Fund, - Personal
Conduct of action research	To enrich the research capability of teachers and conduct action research in relation to the TLE components, dimensions and curriculum framework	Attend seminars-workshop on research Create research technical working group to facilitate and assist researchers and the conduct of action research regarding K to 12 curriculum framework of TLE	100% of the faculty should have attended a workshop related to conducting research At least 25% or more of the teachers should have conducted or submitted an action research proposal and/or completed the research	Whole Year Round	- EPS - Principal - Head Teachers - Master Teacher - Research Coordinator	- National Fund - Dept. Fund - Personal

2. General objectives: To enrich teachers' professional standards in the implementation of the TLE K to 12 curriculum.

Conclusions

1. Teacher's demographic profile can be considered as determinants that influence personal growth and professional development regardless of the content knowledge on the highlights of the K to 12 curriculum implementation.

2. The conduct of in-service-training program was an integral part of teachers' personal growth and professional development which improved the content knowledge of the TLE teachers on the highlights of the K to 12 curriculum implementation.

3. Despite challenges, the proposed development plan ignites an opportunity for teachers to adopt change towards curriculum transformation. Thus, a sustainable program for seminars, training, coaching, and research development for teachers concerning the features and imperatives of the K to 12 curriculum creates an avenue to intensify teachers' personal growth and professional development.

Recommendations

1. Designated school administrators/heads should maintain the image of model implementers of the in-service training program and other related seminars in response to teachers' needs and standards toward the realization of the educational program under K to 12 curriculum.

2. Consistent evaluation and review mechanism in maintaining a high standard of teachers' content knowledge on the highlights of the K to 12 curriculum implementation.

3. Allocate enough financial resources that will support programs related to teachers' personal growth and professional development and research development in relation to the K to 12 programs of TLE component.

4. Suggestion for future research includes conducting the streamline assessment of technical and instructional competence of TLE teachers and students in line with the TLE curriculum framework and apply parametric test between the variables on the framework.

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