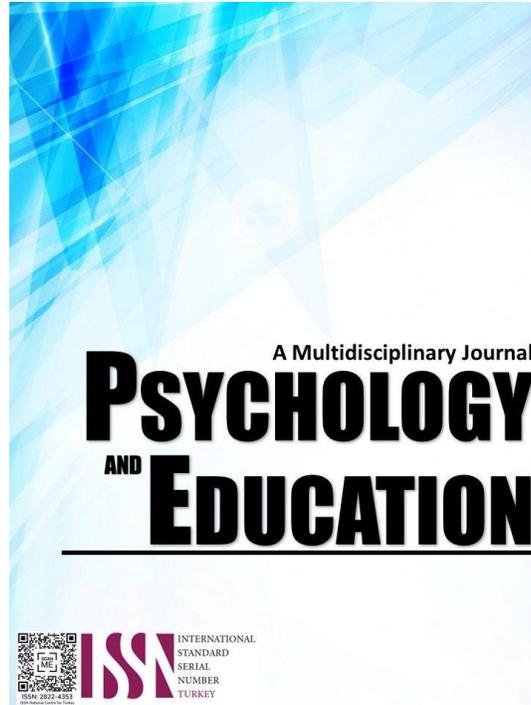


THE PHENOMENON OF LEADING AMONG SENIOR MASTER TEACHERS IN THE 21ST CENTURY EDUCATIONAL LANDSCAPE



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The Phenomenon of Leading among Senior Master Teachers in the 21st Century Educational Landscape

Roel S. Antonio*

For affiliations and correspondence, see the last page.

Abstract

This study explored the leadership experiences of senior master teachers in the 21st-century educational landscape using descriptive phenomenology, specifically the Modified Stevick-Collaizi-Keen Method. Through interviews and thematic analysis, insights were gathered from six senior master teachers, revealing their dual roles as teachers and leaders. Seven themes emerged regarding their role as teachers: (1) valuing technological innovations and ICT, (2) nurturing a learner-centered K to 12 curriculum, (3) possessing knowledge of curriculum attributions, (4) teaching 21st-century skills, (5) demonstrating personal and emotional impact, (6) internalizing personal goals, and (7) mastering the new curriculum. For their leadership role, nine themes surfaced: (1) exemplifying work values, (2) instructional supervision, (3) ethical classroom observations, (4) fulfilling duties and responsibilities, (5) leading by example, (6) promoting professional growth, (7) requiring leadership skills, (8) empowering colleagues, and (9) addressing 21st-century challenges. Findings highlight that master teachers remain proactive and updated despite their age. However, continuous ICT skill development is crucial. The Department of Education should enhance professional development programs, particularly in instructional supervision, leadership, and management. Training for novice master teachers is essential to prepare them for the evolving demands of the 21st-century educational landscape.

Keywords: *phenomenon, leading, role as a leader, role as a classroom teacher, 21st century educational landscape, senior master teacher*

Introduction

“Effective leadership is the only competitive advantage that will endure. That’s because leadership has two sides- what a person is (character) and what a person does (competence)” Stephen Covey, author of *The Seven Habits of Highly Effective People*

Teaching is a universal activity. It is found in all societies and in all historical periods. Without teaching or the intentional transfer of knowledge, civilization quite simply would cease (Duke, 1990). In its broadest sense, teaching is a process that facilitates learning. It is the specialized application of knowledge, skills and attributes designed to provide unique service to meet the educational needs of the individual and of society. The choice of learning activities whereby the goals of education are realized in the school is the responsibility of the teaching profession (The Alberta Teachers’ Association, 2017).

Teaching with integrity requires leadership. Teaching is leading; teachers are leaders. Teachers come into the classroom from many cultural backgrounds and with a variety of professional experiences. Many are drawn by a deeply human desire to serve their communities, to engage in a work that is meaningful, to “make a difference.” Entry into the daily work of classroom teaching is no mean feat, requiring courage, persistence, and leadership from the earliest days (Collay, 2011).

Teachers can find a wealth of opportunities to extend their influence beyond their own classrooms to their teaching teams, schools, and districts. In every good school, there are teachers whose vision extends beyond their own classrooms—even beyond their own teams or departments. Such teachers recognize that students’ school experiences depend not only on interaction with individual teachers, but also on the complex systems in place throughout the school and district. This awareness prompts these teachers to influence change (Danielson, 2017).

There has been much interest in recent years in creating roles for teachers that incorporate specialized expertise and responsibilities, commented Edward Liu of Rutgers University. These roles can be extremely varied. They include math coaches and consultants, technology coordinators, mentor teachers, mentoring and induction coordinators, peer reviewers, special education inclusion coordinators, department chairs, grade-level team leaders, and house leaders. The responsibilities assumed by these individuals are as varied as their titles. They may serve as informal resources to other teachers, open their classrooms to outside visitors, work with student teachers, interact with administrators, organize and deliver professional development, or oversee novice teachers (The National Academies Press, 2010).

Harrison and Killion (2007) point out that teacher leader assumes a wide range of roles to support school and student success. Whether these roles are assigned formally or shared informally, they build the entire school’s capacity to improve. Because teachers can lead in a variety of ways, many teachers can serve as leaders among their peers. They exhibit leadership in multiple, sometimes overlapping, ways. Some leadership roles are formal with designated responsibilities. Other more informal roles emerge as teachers interact with their peers. The variety of roles ensures that teachers can find ways to lead that fit their talents and interests. Regardless of the roles they assume, teacher leaders shape the culture of their schools, improve student learning, and influence practice among their peers.

In China, teachers advance along a clear professional hierarchy over the course of their careers. No such clear hierarchy exists in the

United States. U.S. teachers' careers should instead be viewed as following "trajectories," with different routes possible at different stages in the profession. Some of these routes lead toward positions that could be grouped under the heading of "master teacher," but these roles are extremely varied (The National Academies Press, 2010).

A Master Teacher position is an opportunity for a small group of educators to work closely with their school and/or district leadership to promote excellent teaching expand their reach beyond the classroom by sharing their expertise, effective practices, peer coaching, and creating a collaborative learning culture with colleagues and developing a strong school culture through peer support, collaboration, and trust (Teacher Career Pathways, 2017).

Public schools in the Philippines should have one Master Teacher for every six to seven teachers. Part of their functions is to develop teachers' teaching proficiency through trainings, seminars, mentoring and coaching. They provide technical assistance for teaching effectiveness and improve learning outcomes. All Master Teachers are required to handle a class advisory due to the exigency of service. They are viewed to have expertise in the teaching profession and therefore, innovate and initiate programs, projects and activities for the benefit of the teachers and of the learners in general.

In the current era of education, all master teachers should consider that each learner exhibit identified skills such as communication, collaboration, creativity, and critical thinking. These learning and innovation skills increasingly are being recognized as the skills that separate students who are prepared for increasingly complex life and work environments in the 21st century, and those who are not (P21 Partnership for 21st Century Learning, 2007). Duke (1990) stresses that to teach effectively, a teacher must possess considerable skill, knowledge, patience, caring, commitment and most of all understanding. A teacher must understand himself/herself and those with whom s/he works. In addition, a teacher must understand various contexts in which s/he will work.

To cope with the challenges of the times, Master Teachers should ensure that their duties and responsibilities are performed while maintaining quality of instruction along with the DepED standard. Indeed, they are trained in traditional model of teaching, however, they have to respond to the call and demands of the 21st century teaching. Hence the researcher is interested to see master teacher in the leadership perspective taking into account the numerous obligations, challenges and expectations on the 21st century educational landscape.

The purpose of this research is to explore the phenomenon of leading among master teachers that are pivotal in the development of the 21st century skills. At equal importance, it examines how they discharge their duties and responsibilities as Master Teacher in the 21st century educational landscape.

Research Questions

The study aims to gain insights on the phenomenon of leading among Senior Master Teachers in the 21st Century Educational Landscape.

Methodology

Research Design

The current study incorporates a descriptive qualitative design guided by the tenets of Phenomenology. It was chosen because it places emphasis on understanding the phenomena under study from the perspective of individuals who have experienced it (Creswell, 2013). According to Giorgi (2008) as illustrated by Groenewald, (2004), the operative word in phenomenological research is 'describe'. The researcher aims to describe as accurately as possible the phenomenon, refraining from any pre-given framework, but remaining true to the facts. The center of the study focused primarily on phenomenon of leading from the lived experience of master teachers in the 21st century educational landscape.

The study was conducted in a Pilot/SPED schools in the six Divisions of Region XII which includes Sultan Kudarat, South Cotabato, Sarangani, and the City Schools Division of General Santos, Koronadal and Tacurong.

The Master Teacher-participants were purposively identified after meeting the set selection criteria. There were six senior master teacher-participants from a Pilot/SPED school in Region XII. They are considered as the longest in terms of length in service as senior master teacher in their school and proactive in the discharge of their roles as teacher and as a leader in the new era of education.

The study used semi-structured and open-ended in-depth interview guide questionnaire formulated under the guidance of the research adviser and research panels. The question guide uncovers the phenomenon of leading among master teachers focusing on their role as teacher and as a leader in the 21st century educational landscape.

The study adopts the modified Stevick-Colaizzi-Keen method introduced by Moustakas (1994). The process in analyzing the data employs in-depth interviews. From the interview transcription of the participants, significant statement and meaning were formulated and subsequently follows a thematic analysis. A textural-structural description that emerged in the thematic analysis represents the meanings and essences of the experience which in turn be combined to form the universal description of the group experiences.

Figure 1 presents the research design framework featuring the processes of this study. It includes the statement of the problem, locale

of the study, participants, research instrument, and data gathering and analysis.

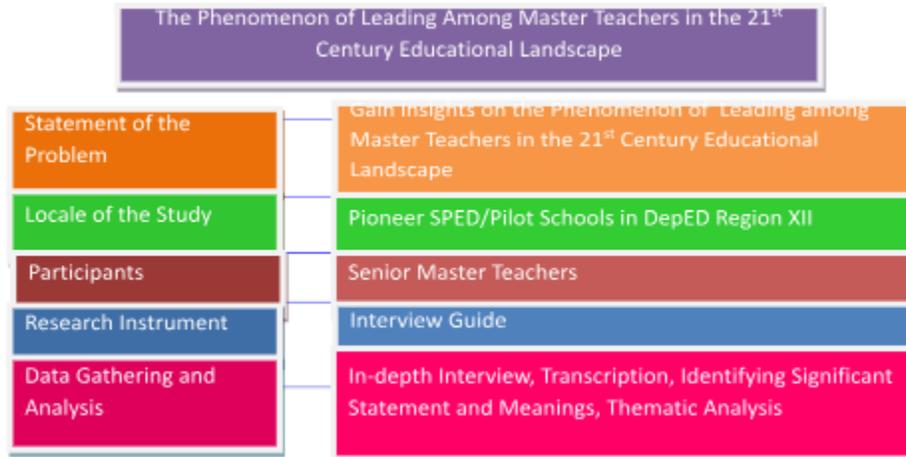


Figure 1. *Research Design Framework on the Phenomenon of Leading Among Master Teachers in the 21st Century Educational Landscape*

Instrument

The instrument created to guide the interview process followed a semi-structured conversational format with the interviewer encouraging the participants to discuss, clarify, or elaborate on each question (Moustakas, 1994). A semi-structured interview is a technique for generating qualitative data and is characterized by open-ended questions that are developed in advance and by prepared probes (Morse & Richards, 2002). The researcher made a prepared question guide for the participants to have a smooth conduct of the interview. The interview guide was divided into two parts: Part I was composed of the personal information of the participants; and Part II contains the semi-structured interview guide questions which was appear at the research appendix (appendix b, in-depth interview guide) of this research.

The interview guide was constructed based upon the research objectives with the guidance of the research panels and adviser. Moreover, the questions were also be referred to a qualitative research-expert in the field of phenomenology. The instrument was reviewed by the pool of expert in the field to ensure its applicability.

After the field-tested interview, the decision was made to increase the conversational tone of the interview. Comments and suggestions were incorporated for the finalization of the research instrument.

Data Analysis

The study was conducted at DepEd Region XII. The participants of the study are the senior Master Teachers from a pioneer SPED/Pilot Schools in Region XII.

The researcher used a data collated from the leading experiences of Master Teachers particularly their role as a teacher and as a leader in the 21st century educational landscape. It utilized a semi-structured open-ended guide questionnaire formulated under the guidance of the research adviser and panel members, and subsequently to be validated by the expert in the field of qualitative research.

In-depth interview was utilized to explore the phenomenon of leading from the lived experiences of Master Teachers in the 21st Century Educational Landscape. It recognized the leading practices of the group of master teachers that contribute to the development of the 21st century skills.

The participants were encouraged to answer all the questions in detail but they are allowed to refrain and may exit during the course of the interview. The researcher ensures all participants about the confidentiality of the responses and assigned a pseudonym to hide the identity of each participant.

English was used as medium for communication in the conduct of the In-depth Interview. However the language preferences among participants was also considered.

The data for this study was collected from October to November, 2017. Further, the data collection methods were sequential and the data gathered were coded for analysis purposes. Based on the research objectives, there were four data gathering methods that contributed to the robust set of data for this study: (1) In-depth interview; (2) Interview transcription; (3) Significant statement and formulated meanings; and (4) thematic analysis.

This study utilized the Modified Stevick-Colaizzi-Keen method introduced by Moustakas (1994). The process employs phenomenological reduction, which includes bracketing, horizontalizing, organizing invariant qualities and themes, and constructing

textural description. Data analysis commenced as soon as the first set of data was available. The significant statements were identified and meanings were formulated and consequently clustered into themes. Significant statements and themes were synthesized into a description of the texture (the what). The textural description was examined from different perspectives (imaginative variation) and eventually arrives at a description of the structure (the how). A textural-structural description that emerges represents the meaning and essence of the experience. The textural-structural descriptions emerged were combined to form the universal description of the group experiences.

The recordings were transcribed verbatim for analysis, excluding any conversation outside the scope of the study and stored on a flash drive. The flash drive and all written documents related to the study were kept in a locked cabinet when not in use.

In-Depth Interviews

Semi-structured interview was designed to uncover more deeply the participant's lived experienced as a Master Teacher in the 21st century educational landscape covering their leading experiences in the discharge of their duties and responsibilities. Initial interview was conducted to participants for one hour. The goal of this interview is to establish baseline understanding of the belief of educators about 21st century teaching, learning and leading. Creswell (2013) clarifies that the goal of the interview is to elicit stories from participants rather than prompt them to make judgments or inferences about their experiences.

All master teacher respondents answered the same questions in the interview. However, probing and clarifying questions were surfaced depending on the direction of the interview. All interviews were audio and video recorded and transcribed for the coding analysis. Moustakas (1994) mentioned that the value of the data lies in the essence or meaning individuals attach to their lived experiences.

In addition, the focus of the interview varied depending on content and themes that emerged from the initial interview. The language preference of the interviewee was considered, however, English language was encouraged as medium of communication in the actual conduct of the interview. All responses of the participants were audio recorded and a tape recorder was ready in use during the conduct of the interview so that voice tape transcription should be translated properly without losing the original ideas of the interviewee's response. Further, presentation of the transcript and themes to the respondent was made to countercheck the thoughts and context of the participant's response.

Interview Saturation Point

The interview saturation point was reached after repetitions of responses among the participants especially in the research problem. This connotes that the participants had similarity of experiences and the tenor of the answers will have the same flow. At this point, the researcher refrained from expanding his research key informant and combined the textural-structural and descriptive into composite description to build the essence of the whole group experience.

The researcher conducted a validity check by returning to the informant the transcribed interviews to determine if the essence of the interview is correctly captured (Hycer, 1999). Modification was done as a result of the validity check. Consequently, the result was presented to the researcher's adviser to counter check if saturation point was met.

Results and Discussion

The purpose of the study was to uncover the phenomenon of leading from the lived experiences of Master Teachers in the 21st Century Landscape. In this Chapter, findings are presented in relation to the main component of the research questions. The result is based on the conducted In-depth Interview (IDI) of the participants which was divided into two parts:

Part I presents the personal information about the participants. It contains pseudonym, sex, age, school, position, length in service in the current position, educational qualification, eligibility, grade level currently teaching, designations and awards received.

Part II presents the semi-structured interview guide. It provides descriptions of participants' lived experiences based upon their understanding of leading, 21st century teaching and its difference in the traditional model of teaching and accordingly, the participants' experiences in leading as Master Teachers in the present educational setting. Probing questions were developed depending on the cues of the participants' responses.

This research utilized the Modified Stevick-Collaizzi-Keen Method introduced by Moustakas (1994). It employs phenomenological reduction including bracketing, horizontalizing, organizing invariant qualities and themes, and constructing textural description of the phenomenon. Data gathering methods include (1) In-depth interview; (2) memoing and (3) presentation of transcripts and themes to the participants for confirmation were used in the study.

Summary of the Phenomenon of Leading

This study was a product of qualitative research guided by the tenets of Phenomenology. The participants of the study were the identified senior master teachers from pioneer SPED or Pilot schools in Region XII. Of the six (6) master teacher-participants, five (5) of them are holding a Master Teacher II position, predominantly female (4 out of 6) and nearing retirement age (55-60 years old). Four (4) out of six (6) participants shared that they are all Division and Regional awardee for the search of outstanding Master Teachers in

Region XII while the remaining two (2) participants were recognized outstanding in the school and district level based upon the result of the school/district evaluation.

This study utilized the modified Stevick-Colaizzi-Keen method introduced by Moustakas (1994) which employs phenomenological reduction, which includes bracketing, horizontalizing, organizing invariant qualities and themes, and constructing textural description. A textural and structural description of the lived experience was formulated after a deeper analysis of the participants' responses. Further, in-depth interview was also utilized to gain deeper understanding on the lived experiences of the participants.

The result of the study weaves a rich story of leading experiences of master teachers in two roles: role as a teacher and role as a leader in the 21st Century educational landscape.



Figure 2. Summary of Emergent Themes on the Phenomenon of Leading Among Master Teachers in the 21st Century Educational Landscape

Role as a Teacher in the 21st Century Landscape

The result portrayed in this segment depicts the participants' role as a full time classroom teacher in the 21st century educational landscape. Thematic analysis reveals seven (7) emergent themes that came out after clustering the subthemes. These were: (1) leading is valuing the importance of technological innovations and ICT; (2) leading is nurturing learner-centered k to 12 curriculum; (3) leading is possessing knowledge on the attributions of the new curriculum; (4) leading is teaching the skills required for the 21st century; (5) leading is exemplifying strong personal and emotional impact on the teaching profession; (6) Leading internalizes personal goals and aspirations toward teaching profession; and (7) leading is demonstrating knowledge and skills in the new curriculum.

At the threshold of the 21st century, ICT launched technological innovations and instructional tools that bring about impact on the role of master teachers as a teacher themselves. Participants emphasized how ICT changes learning engagement among learners from passive recipients of knowledge to active partners in learning. In this day and age, teachers are engaged in a variety of teaching pedagogies such as explicit teaching, IT-aided instruction, differentiated instruction and other form of learning modalities that leads to the development of the 21st century skills such as: communication and collaboration skills, problem solving/critical thinking skills and

creativity, facilitating skills, ICT literacy and skills, social-emotional and multi-cultural literacies and skills. A well-designed holistic structure is noticeable in the new curriculum. They testify that teachers are well guided with the new curriculum within the principle of spiral progression.

ICT and digital technologies such as computer and internet bring changes even in the enrolment and reporting system of the school. They pointed out that the main focus of the 21st century is the use of technology hence, there is a need to be equipped with ICT so as cope up with the challenges of the 21st century and become globally competitive.

Master Teachers demonstrate knowledge and skills in the new curriculum. They have clear understanding of the new curriculum and ensure that they are much knowledgeable than anyone else in the school.

The participants themselves agreed that they are satisfied and fulfilled with their job despite of the numerous challenges confronting their role as teacher. Their genuine love and passion in teaching fueled them in doing their best on their job. It has been proven that master teachers are performance driven and task oriented teacher-leaders. These might be the reasons why most of them received recognition from different award giving bodies. Somehow, this gesture provides external motivation and effective disposition of their roles as teacher and as a leader in the new landscape.

Role as a Leader in the 21st Century Landscape

There were nine themes that emerged pertaining to the participants' experiences on their role as a leader in the 21st century educational landscape. These comprise the following emergent themes: (1) leading by exemplifying work values; (2) leading in the instructional supervision; (3) leading by observing ethical standards and procedures in conducting classroom observation; (4) leading by demonstrating duties and responsibilities towards others; (5) leading by example; (6) leading promotes professional growth and development; (7) leading requires leadership skills; (8) leading by empowering colleagues; and (9) leading addresses challenges in the 21st century.

The participants possess leadership skills such as problem solving and creativity, collaboration and communication skills, ICT literacy skills as well as interpersonal skills. These skills enable them to effectively discharge their duties and responsibilities in the new landscape. Further, a deeper analysis shows that Master teachers are clothed with a set of work values such as commitment, hard work, diligence, patience, dedication, strong determination, compassion, faith and devotion to God, self-motivated, positive attitude, flexibility and honesty. Both skills and values speak about the participants' experience in leading particularly their role as a leader in the 21st century educational landscape.

All of them spoke that they assist their principals in the instructional supervision to uplift teachers' teaching performance and in turn contribute to quality education for the benefit of the learners in general. It is their prime duty to improve teaching and learning thus, they engage in several activities such as supervision, monitoring and regular classroom observations. Attached to their position is the role as instructional leaders who mentors and coaches others in the instructional delivery. As they continue their pursuit for quality education, they do provide constructive feedbacks and technical support to their colleagues while observing protocols in evaluating teachers' performance. Oftentimes, they remain positive by motivating others to harness their skills in view of the fact that teachers need continuous professional growth. For them, leadership requires involvement thus, they facilitate consultation for the realization of school programs and projects. They served as inspiration to others by setting a good example that might influence and change others.

In the new landscape, Master Teachers are confronted with numerous challenges as leaders particularly time management, lack of motivation, lack of interest to technology due to health condition and the ICT literacy among old teachers and its utilization to teaching learning process.

Conclusions

This study provides insights on the phenomenon of leading among master teachers in the 21st century educational landscape. The data obtained provide a wider perspective that served as vehicle in understanding how senior master teachers lead in the digital age.

At the heart of the 21st century lies different learning modality that offers borderless learning territories among learners and teachers. Nowadays, classrooms are equipped with technological innovations with the aid of digital media. Despite the technological advantage, senior teachers paid less attention to its utilization which impedes the development of digital/ICT literacy skills among them. Technically, most of them are perceived as incapable due to their age and health conditions. Apparently, most of the senior master teachers are fully equipped with necessary skills needed for the 21st century. They have full understanding of the importance of ICT as a powerful instrument that brings positive impact on the academic sphere of the learners.

Senior master teachers do appreciate the beauty of the K to 12 curriculum, a paradigm shift from traditional model of teaching to the 21st century teaching which offers a vast opportunity for growth and development. Along with the new curriculum, is the need to master a set of competencies and manifest the 4C's of the 21st century such as: Collaboration, Communication, Critical thinking or Problem solving and Creative thinking skills, alongside with some identified literacies and skills to wit: ICT literacies and skills, Multi-cultural literacy, Social emotional literacy and Facilitating skills. These are essential components to be globally competitive and cope with the demands and challenges of our times. In a wider perspective, senior master teachers have a full grasp of the principles and

philosophies underlying curriculum.

An effective instructional leader should have theoretical background, knowledge and skills in the new curriculum. This might sound a mere administrative perspective however the master teacher themselves are replica of teacher leader who governs and leads change in the academic aspect of the school. It can be inferred that their role as teacher and academic leader is grounded around their experiences in the education service delivery. This is in view of the fact that not all master teachers have the same functions. This would mean that Master Teachers have varied designations, roles, duties and responsibilities to undertake. Much of these are entrusted to those who are capable and can efficiently and effectively impact positive change in the school educational system which on this case are the senior master teachers. They believed that leaders should facilitate and seek the opinions of followers through consultative and participative manner. When asked to describe their experiences in leading, they narrated numerous stories drawn from their wealth of experiences.

Senior Master Teachers, despite their age, are equipped with the 21st century leadership skills. They are proactive in the discharge of their duties and responsibilities as Master Teachers, demonstrate knowledge in the instructional supervision and armed with leadership qualities and characteristics necessary in coping up with the demands and challenges of the 21st century.

Likewise, the findings provided a base knowledge that master teachers have likely been in practice a wide array of work values that are essential in the discharge of their duties and responsibilities as well as their instructional role in providing quality instruction. These values include commitment, hard work, diligence, patience, dedication, strong determination, compassion, faith and devotion to god, self-motivated, positive attitude, flexibility, honesty.

Collaboration, communication, critical thinking skills and creativity have been found to be the most common exemplified skills among master teachers. However, they have to reckon with on developing among themselves the least practiced skills such as information, media, and technological skills. These skills play an integral role in doing their functions as classroom teachers and as teacher-leaders themselves.

Different challenges are documented confronting their leadership as master teachers. Results were dominantly pinpointing the lack of motivation, time management, lack of interest in technology and ICT literacy among old teachers.

References

- Andres, T. D. (1984). *Understanding the filipino values*. Quezon City: New Day Publishers.
- Applebaum, M. H. (2011). *Amedeo giorgi and psychology as a human science*. neuroquantology, Bornova Izmir, Turkey. Retrieved from <https://search.proquest.com/docview/1724504614?accountid=141440>
- AtLas.ti, (2018). *Qualitative research methods and methodology*. Qualitative Data Analysis. Retrieved from: <http://atlasti.com/qualitative-research-methods/>
- Barnett, D. J. (2006). *Leadership Communication*. Mc Graw Hill/Irwin. The Mc Graw Hills Company Inc. New York.
- Beck, C. T. (2006). *Phenomenology*. Springer Publishing Company, New York, United States, Medical Sciences-Nurses And Nursing Retrieved from <https://search.proquest.com/docview/189461190?accountid=141440>
- Bernard, J. M., & Goodyear, R. K. (1998). *Fundamentals of clinical supervision*. Boston: Allyn and Bacon.
- Berry, B. (2010). How do you define 21st century learning. Retrieved from <https://www.edweek.org/tsb/articles/2010/10/12/01panel.h04.html>
- Boyd-Dimock, V. and McGree, K. (2017). *Leading change from the classroom: teachers as leaders*. Retrieved from: <http://www.sedl.org/change/issues/issues44.html>
- Brundrett, M, Burton, N., and Smith, R. (2010) *Leadership in Education*. SAGE Publication Retrieved from <https://ebookcentral.proquest.com/lib/ndmuibed-ebooks/reader.action?docID=254574>
- Center on Great Teachers and Leaders (2014). *Technical assistance*. American Institutes for Research 1000 Thomas Jefferson Street NW Washington, DC 20007. Retrieved from <https://gtlcenter.org/technical-assistance>.
- Chan, Z. C Y, Fung, Y. and Chien, W. (2013). Bracketing in phenomenology: only undertaken in the data collection and analysis process? *The Qualitative Report*. Fort Lauderdale, United States Retrieved from <https://search.proquest.com/docview/1505321230?accountid=141440>

Affiliations and Corresponding Information

Roel S. Antonio, PhD

Laguilayan Central Elementary School
Department of Education – Philippines