

# Investigating the Moderating Effect of Profile on the Relationship between Pedagogical Knowledge Competence and Organizational Citizenship in the Context of Secondary Teachers

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**Abstracts:** This study aimed to investigate the relationship between pedagogical knowledge competence (PKC) and organizational citizenship (OC) among secondary teachers, considering the potential moderating effects of the teacher's profile. Using a descriptive correlational design, the study explored the natural associations among participants' profiles, PKC, and OC. The sample included 267 secondary teachers from nine DepEd secondary schools in Butuan City, Philippines. Data collection involved a validated researcher-made survey questionnaire that addressed the following aspects: (1) Teachers' profiles, including age, sex (at birth), and type of professional teacher certification. (2) The level of PKC focuses on contextualizing learning experiences, teaching strategies used, and integration of information and communication technology (ICT). (3) The level of OC, examining occupational efficacy and collective efficacy. The findings indicated that age and the type of professional teacher certification did not moderate the relationship between PKC and OC. However, sex (at birth) demonstrated a moderating effect. Furthermore, the study revealed that both the age range of 22-32 years old and PKC significantly predicted OC. This suggests that older teachers tend to perceive higher levels of organizational citizenship compared to their younger counterparts, and teachers with greater perceived PKC exhibit increased efficacy in organizational citizenship. Additionally, the findings underscored a significant gender imbalance within the teaching profession, with a disproportionate representation of females.

**Keywords:** Pedagogical knowledge competence, Organizational citizenship, Occupational efficacy, Collective efficacy, the traditional route of certification, the alternative route of certification, Moderation analysis.

## 1. INTRODUCTION

There is in the world today the clarion call for accountability grounded on competence and performance of employees. Competence is the essential knowledge, skills, and attitudes (KSA) required to raise the bar on the performance of employees, which in turn contributes to organizational success. All professions, including the teaching profession and its organization, are never exempted from compliance with certain standards to cultivate desired competence and performance yielding efficacy and success in the organization. However, internal and external factors may likely influence, if not, greatly impact competence and efficacy of employees, in this case, the teachers themselves. Taking into consideration, age, sex (at birth), and types of professional certification obtained by the teacher as internal factors relating to the personal profile. On the other hand, the external factors may include the kind of interactions happening in the organization. The competence, in general, including pedagogical knowledge competence (PKC) of the teacher invariably may relate to his/her efficacy, either occupational efficacy as a teacher or collective efficacy as a member in a teaching profession organization, such that, characterizes organizational citizenship (OC).

In the Philippines, the Department of Education (DepEd) established and adopted the Philippines Professional Standards for Teachers (PPST), which is composed of seven (7) domains and thirty-seven (37) strands that refer to the specific dimensions of teachers' practices. First on the list among the domains are content knowledge and pedagogy. Primarily, content knowledge and pedagogy are acquired through education and training per se. Upon completion, authorities confer a certain degree or certification, in this case, the teacher education degree or professional teacher certification.

In practice, professional teacher certification is obtaining a license to teach after earning the necessary teacher education degrees or compliance with minimum requirements and passing the licensure examination for teachers (LET). There are two (2) routes of obtaining a degree in the teaching profession preceding licensure, the (1) traditional route to certification (TC) commencing upon entry and completion of the full-term four-year teaching

degree program and the (2) alternative route to certification (AC) or the compliance of the minimum requirements of eighteen (18) units or thirty (30) units among the so-called unit-earner and 'second-courser'. This is stipulated in Republic Act 7836 otherwise known as the Philippine Teachers Professionalization Act of 1994 Article III, Section 15(e), on Examination and Registration of applicants requiring a graduate of a school, college, or university recognized by the government and possesses the minimum educational requirement for teachers in the secondary grades or level, a bachelor's degree in education and for teachers of vocational and two-year technical courses, a bachelor's degree in the field of specialization or its equivalent, with at least eighteen (18) units in professional education.

While it may be comfortable to presume that earning an alternative route to the teaching profession is more advantageous than earning the traditional route to certification, the study of the same is wanting primarily because all in-service teachers passed through any one of these routes. On one important note, professional teacher certification is one crucial demographic of teachers considered in this study. Scant research studies used this demographic profile to ascertain its moderating effect on teachers' pedagogical knowledge competence (PKC) and organizational citizenship (OC). Further, there is a need to establish evidence from studies on how professional teacher certification affects the level of a teacher's own pedagogical knowledge competence, specifically in the areas of contextualizing learning experiences, teaching strategies used, and information and communication technology (ICT) integration in instruction. Wherein, pedagogical knowledge competence per se encompasses several facets in teaching and learning, ranging from a teacher's efficacy in planning, managing, implementing, and evaluating learning plans and activities to his/her ability to make and effect favorable change in learners' life.

On the other hand, studies on organizational citizenship are primarily common among non-educational settings, scant research studies, however, can be found in schools and in teaching profession organizations. Cognizant of this gap, this study attempts to correlate the pedagogical knowledge competence of teachers with organizational citizenship by examining teachers one's own occupational efficacy and collective efficacy. Further, it aims to establish the relevance and nexus of the type of teacher certification (TC or AC) on the levels of teachers': a) pedagogical knowledge competence and b) organizational citizenship. The latter accounts for teachers' behavior that goes above and beyond the requirements of their roles and functions, so much so, a potential determinant in task performance. Although there may not be any immediate rewards for teachers who view themselves as citizens of their teaching profession, they are confident that their efforts will benefit the organization in the long run. Good citizenship can take many different shapes at work. Simple things like meeting attendance and arriving at work on time can make a difference. It can also be more significant, such as taking on extra tasks without being asked, providing assistance or guidance to others, or going above and beyond to ensure that work is completed correctly.

That being said and among other premises considered, this study purports to investigate the moderating effect of the teachers' demographics i.e., age, sex (at birth), and types of professional teacher certification on the relationship between pedagogical knowledge competence (PKC) along specific areas, i.e., contextualizing learning experiences, teaching strategies used, and ICT integration in instruction, as well as on their organizational citizenship (OC), i.e., occupational efficacy and collective efficacy. The moderating variables can affect the relationship between PKC and OC, such that, it can either strengthen or weaken the relationship between these variables or if not, negate the relationship. To say the least, relationships between these variables, i.e., PKC and OC, can be null, and covariant or influential. The null predicts no relationship between PKC and OC, such that, these variables function independently of each other. Covariant relationship between these variables exists when a change in one variable is associated with a change in the other, that is, supposing, the teacher's level of PKC gets higher, and so is his/her level of OC. Thus, depending on the circumstance, a moderating variable can moderate between two variables in one or in many different ways.

## **2. THEORETICAL FRAMEWORK**

This study on the moderating effect of demographics on the relationship between pedagogical knowledge competence and organizational citizenship of secondary teachers is anchored on the Self-Efficacy Theory (SET) of Albert Bandura. This study presupposes that the acquisition of professional teacher certification as one important

demographic profile of teachers and their pedagogical knowledge competence, as well as the development and continuance of organizational citizenship, primarily are impacted by their own self-efficacy, as these are considered tasks, actions, and endeavors for personal growth and advancement. Presumably, self-efficacy is a propelling force enabling one to achieve a better version of oneself in both work and professional life, yielding desired competencies and good organizational citizenship. Hence, the bearing and utility of SET in this study will be discussed in this section.

The term self-efficacy was first coined by Albert Bandura in 1977. He is a Canadian American psychologist and a professor at Stanford University. His theory is grounded on the basic assumption that people's beliefs in their capabilities to produce desired effects through their own actions are significant factors in determining people's behavior and their level of persistence in the face of difficulties and challenges (Bandura, 1997, p. vii as cited by Maddux (2012)). In other words, self-efficacy is a person's faith in one's own ability to succeed and bring about desired results in his/her life- it is believing that as what he/she thinks, so is he/she. It is the very act of faith in what "I can do" and what "I am capable of doing" in an individual. In the process, becoming efficacious in something and achieving something, whether personal, interpersonal, professional, career, or work is a matter of faith in oneself. However, a faith that is not actualized, performed, or even attempted does nothing until it is done.

But how does self-efficacy develop in oneself? First, it is better to recognize that self-efficacy is best understood in the context of social cognitive theory – an approach to understanding human cognition, action, motivation, and emotion that presupposes that individuals actively shape rather than merely respond to their environments (Bandura, 2001, 2006; Barone, Maddux, & Snyder, 1997; Molden & Dweck, 2006; Maddux, 2012). There are four core assumptions of the social cognitive theory, to mention, (1) Individuals have cognitive abilities that enable the construction of internal models of experience, the creation of novel strategies, the hypothetical testing of such strategies through the prediction of outcomes, and the dissemination of complex ideas and experiences to others. Also capable of self-observation, analysis, and evaluation of one's own actions, feelings, and thoughts. The foundation for self-regulation is laid by these self-reflective exercises. These self-reflective activities set the stage for self-regulation; (2) Interacting influences include environmental elements, internal personal aspects (cognition, emotion, and biological processes), and behaviors. Individuals react to external situations cognitively, effectively, and behaviorally. Additionally, they exert control over our behavior through cognition, which affects their cognitive, affective, and bodily states and their surroundings; (3) Self and personality are socially embedded. They are perceptions (accurate or not) of one's own and others' patterns of social cognition, emotion, and action as they occur in patterns of situations. Thus, self and personality are not simply what one brings to their interactions with others; they are created in these interactions and change through them; and (4) Individuals are capable of self-regulation. They choose goals and regulate one's behavior in pursuing these goals. At the heart of self-regulation is the ability to anticipate or develop expectancies—to use past knowledge and experience to form beliefs about future events, states, and beliefs about one's own abilities and behavior.

Along with the aforementioned assumptions, this study posited that teachers, during the exercise of the teaching profession, held at a certain point of their career (either during preservice or in-service) a significant amount of self-efficacy because endeavors and goals like possessing professional teacher certification and pedagogical knowledge competence and developing and/or sustaining organizational citizenship required so for attaining the same. Take for instance, becoming a certified and licensed professional teacher, it does not only require confidence in oneself but so much so a great amount of faith and/or self-efficacy to hurdle all tests. Salgado et al. (2012), in their study on the Effects of teacher efficacy, certification route, content hours, experiences, and class size on student achievement, quoted that teacher training programs can positively affect teacher attitudes (Bhattacharyya, Volk, & Lumpe, 2009) thus, teacher certification routes are integral systems, which can shape the attitudes and beliefs of teachers (Ucar, 2012).

In a parallel vein, self-efficacy had bearing and utility in pedagogical knowledge competence. Liquido and Mendez (2018) stated that the dominance of self-efficacy in one's own value system, and in one's personality, may have caused the person's way of doing things, getting it done successfully, and in a way influenced the person's means of strategizing actions to come up with the desired outcomes. People from all walks of life, with high self-

efficacy levels, tend to get good and satisfying results, even for a classroom teacher whose students or pupils are difficult to deal with or unmotivated to learn.

Further, self-efficacy is one factor that determines teachers' success in carrying out highly complex tasks. Self-efficacy refers to the level of trust individuals have in themselves to achieve the desired results, (Nuñez et al, 2015; Santrock, J. W., 2003; Van der Bijl & Shortridge-Baggett, 2001 as cited by Mertasari & Candiasa, 2020) complete tasks, (Schunk, 1995 as cited by Mertasari & Candiasa, 2020) realize one goal, (Newstrom, John W. & Keith Davis, 1997 as cited by Mertasari & Candiasa, 2020) so that self-efficacy is a good predictor of performance behavior (Thierry, Henk, 1998, as cited by Mertasari & Candiasa, 2020). Individuals with high self-efficacy are able to do many varied tasks, whereas individuals with low self-efficacy tend to avoid difficult and challenging tasks. (Santrock, John W., 2003 as cited by Mertasari & Candiasa, 2020).

On the bearing and utility of self-efficacy with organizational citizenship, there is a direct positive effect of self-efficacy on organizational citizenship behavior such that individuals with high self-efficacy tend to have high organizational citizenship behavior and vice versa. Teachers who have high self-efficacy, and high job satisfaction at work, and consequently conduct organizational citizenship behavior more frequently. By equipping individuals with high self-efficacy, they can help carry out productive activities, dare to take risks, and maximize their abilities at work. Besides, teachers become aware that the teaching profession is challenging and useful. Therefore, positive behavior can help teachers carry out their duties and responsibilities effectively to achieve the national mission of educating students (Anfajaya & Rahayu, 2019).

In other words, a teacher's sense of self-efficacy can serve as the basis for motivation and success in work and professional life. It is one's mindset, and perhaps a mental stronghold that one can exert control over his/her functioning and over situations and challenges that have an impact on one's life. High levels of self-efficacy have been associated with a variety of advantages in daily life, including resiliency to stress and adversity, healthy lifestyle choices, enhanced employee performance, and academic success.

### **3. METHODS**

This study examined the relationship between demographics, pedagogical knowledge competence, and organizational citizenship among secondary teachers. It employed a descriptive correlational design to describe the natural relationships that exist among the participants' profiles, their level of pedagogical knowledge competence, and organizational citizenship. The study aimed to make predictions regarding the variables under investigation. According to Asamoah (2014), correlational research involves two types of variables: predictor variables (independent variables) and criterion variables (dependent variables or output variables). An independent variable is believed to predict the outcome, while the dependent variable is the variable to be predicted. A moderating variable can influence the relationship between the independent and dependent variables, either strengthening or weakening it, or even negating the relationship altogether. The relationships between these variables can be null, covariant, or influential. A null relationship suggests no association between the variables, indicating that they function independently. A covariant relationship exists when a change in one variable is associated with a change in the other. In certain circumstances, a moderating variable can influence the relationship between variables in various ways. The study was conducted in Butuan City, Caraga Region, Philippines, which is known as one of the most highly urbanized cities in the country.

The research locale for this study consisted of nine secondary schools under the supervision of the Department of Education (DepEd) in the Division of Butuan City. The selection criteria for these schools included their proximity and distance within the city limits, accessibility and ease of transportation, and varying categories of schools based on the school-based management (SBM) level and total teacher population. All nine schools were located within the city limits and accessible by public utility vehicles. They were situated within the political boundaries of the city or in close proximity, within a 100-meter radius range. The schools were categorized based on the SBM levels defined in DepEd Order No. 43, s. 2017. The descriptions of SBM levels 1, 2, and 3 across the four principles (leadership and governance, curriculum and learning, accountability and continuous improvement, and management of resources)

were based on DO 83, s. 2012. Level 1 (Developing) involved the establishment of structures and mechanisms with an acceptable level of community participation and impact on learning outcomes. Level 2 (Maturing) focused on introducing and sustaining a continuous improvement process that integrated wider community participation and significantly improved performance and learning outcomes. Level 3 (Advanced/Accredited Level) ensured the production of intended outputs/outcomes and met all the standards of a system fully integrated into the local community, self-renewing, and self-sustaining. The school size in terms of the number of teachers in secondary schools was categorized as small (9 teachers and below), medium (10-25 teachers), large (26-100 teachers), and mega (101 teachers and above).

To ensure representative sampling and minimize sampling biases, this study employed proportionate stratified random sampling. This approach helps achieve homogeneity within strata and maximizes variance across strata. The population was divided into strata, and each stratum's sample size was directly proportional to the population size of that stratum. This ensures that the samples drawn are representative of the entire population and avoids overrepresentation or underrepresentation. The participants of the study were secondary teachers selected from a sampling frame consisting of the nine public secondary schools located within the city limits, which are considered urban schools. The total number of teachers in these schools was 866. Using the Raosoft calculator to determine the sample size, a recommended sample size of 267, or approximately 30.83% of the population, was obtained. The same percentage was applied to each stratum, ensuring that the stratum sample size was directly proportional to the population size of that stratum. To select subsamples within each stratum or school, a complete list of teachers from each grade level (Grade 7-12) was generated. For each level, the teacher-respondents were randomly selected using an online list randomizer. Table 3 (see next page) provides the distribution of participants, taking School A as an example. With a sample size of 136 teachers across all levels, the sample was divided equally among the grade levels, resulting in an average of 22 or 23 teachers per level who were randomly chosen as respondents.

Throughout the research study, strict adherence to ethical considerations was of paramount importance. The study followed the principles of secure informed consent, which consists of two essential elements: being "informed" and giving "consent" (Denzin & Lincoln, 2011, as cited by Fleming & Zegwaard, 2018). Participants were provided with comprehensive information about the study, including the purpose, procedures, and data usage. Their consent to participate was voluntary, and they were made aware of their right to withdraw from the study at any point. Respecting participants' informed consent was the primary ethical consideration throughout the entire research process.

#### 4. RESULTS

This part of the paper presents the discussion on the analysis and interpretation of data in tables and graphs. The presentation is sequenced according to the order of the statement of the problem posed in this study.

Table 1 below shows the teacher's profile in terms of age. The majority of teachers in the sample are between the ages of 22 and 43, with 86 teachers (32.2%) in the 22-32 age group and 93 teachers (34.8%) in the 33-43 age group. This means that approximately two-thirds of the sample (67%) are in the early to mid-stages of their teaching careers. The number of teachers decreases in the older age groups, with 55 teachers (20.6%) in the 44-54 age group and 33 teachers (12.4%) in the 55-65 age group. This indicates that the number of experienced teachers in the sample is relatively small, which could have implications for the overall quality of teaching in the school or organization. Additionally, it can imply that the majority of them have become administrators, if not retired already.

**Table 1.** Teacher's Profile in Terms of Age.

Age (In Years)	Frequency	Percentage (%)
22-32	86	32.2
33-43	93	34.8
44-54	55	20.6
55-65	33	12.4
Total	267	100.0

Impliedly, the majority of teachers in the sample are within the productive age period in the dispensation track of teachers' education and career according to the average chronological age. In fact, this age range is between the beginning of career age and the middle of career age prior to the age of retirement. Commonly observed, this age range marked permanency of the profession itself or the teaching job per se, presumably because the accounted year of service is within 12 to 22 years, supposing the respondent had started working at the age of 21 or 22, and this is way too established, so to speak. One motivating factor that might have drawn an individual to stay and establish such years in one's own career or any career, including the teaching profession, is the security of tenure or job security.

Another profile of secondary teachers is their sex (at birth). Presented in Table II on the other page shows that the majority of teachers in the sample are female, with 194 teachers (72.7%) compared to 73 male teachers (27.3%). This indicates that there is a significant gender imbalance in the sample, with females being overrepresented in the teaching profession.

It is worth noting that the gender distribution of teachers may have implications for the teaching profession, as it may impact the experiences and perspectives of both male and female teachers. For example, the overrepresentation of female teachers in the sample could suggest that the teaching profession is more appealing to females or that there are fewer opportunities for male teachers.

Moreover, this implies as had been observed that the teaching profession especially in basic education is mostly sought by female individuals, as well as most teaching positions are occupied by female individuals too. This observation is affirmed true by World Bank Data in 2016, that 87.54% of teachers at the primary level in Philippine schools are females and more interestingly, the percentage of women in the teaching profession appears to be rising steadily. Presumably, the same observation can be gleaned in secondary education, wherein most teachers are female.

**Table 2.** Teacher's Profile in Terms of Sex.

Sex	Frequency	Percentage (%)
Male	73	27.3
Female	194	72.7
Total	267	100.0

The other demographic used in this study is the type of professional teacher certification. Table III on the succeeding page shows that the majority of teachers in the sample obtained their certification through the traditional route, with 186 teachers (69.7%). The traditional route of certification typically involves completing a bachelor's degree in education or a related field, followed by a teacher preparation program, and passing state exams.

**Table 3.** Teacher's Profile in Terms of Types of Teacher Certification.

Types of Teacher Certification	Frequency	Percentage (%)
Traditional route of certification	186	69.7
Alternative route of certification	81	30.3
<b>Total</b>	<b>267</b>	<b>100.0</b>

This result implies that the greater majority still preferred the traditional route to certification (TC) as it had been the long-standing practice of earning a degree in the teaching profession. The traditional route to certification (TC) requires approximately four (4) years of the educational cycle under a teacher education program, in this case, the Bachelor of Secondary Education (BSED) program with any one of the identified specializations i.e., Science/Biological Science, Physical Science, Social Studies/Social Science, Mathematics, Filipino, Technology and Livelihood Education/Agriculture and Fishery Arts, Values Education and among others. The graduates of BSED in a certain school, college, or university recognized by the government are certified as secondary or high school teachers. Such certification is reflected in the official transcript of records of the graduate and is a requirement for the application for licensure.

The level of pedagogical knowledge competence of teachers in terms of contextualizing learning experiences, teaching strategies used, and ICT integration is presented in Tables IV, V, and VI.

Specifically, Table IV shows that the mean scores for all indicators are above 3.0, indicating that the teachers are highly competent in contextualizing learning experiences, thus they have a good understanding of how to contextualize learning experiences to match their teaching practices appropriately for learners. They planned their learning activities with due consideration to the individual differences of their learners, identify contextualized learning opportunities that relate to their learners' real world, and design learning activities that are engaging in the learners' context. Additionally, they foster an atmosphere for better adaptability of learners in the classroom by way of collaborating and/or grouping. The highest mean score is for indicator 5 (I cite practical examples when I teach), with a mean score of 3.82, indicating that teachers frequently use practical examples when teaching. The lowest mean score is for indicator 8 (I encourage the use of indigenous materials for their projects and/or performance tasks), with a mean score of 3.49, indicating that teachers may need to further develop their competence in this area.

Further, the results have several implications for teaching practice. First, contextualizing learning experiences is an effective way to make learning more meaningful and relevant to learners. The high level of pedagogical knowledge competence in contextualizing learning experiences demonstrated by the teachers in this sample suggests that this approach is widely used in the classroom. Second, the teachers frequently use practical examples when teaching, which is an effective way to help learners understand abstract concepts and apply them to real-world situations. Third, while teachers encourage the use of indigenous materials for projects and performance tasks, they may need to further develop their competence in this area.

**Table 4.** Level of Pedagogical Knowledge Competence in Terms of Contextualizing Learning Experiences.

Indicators	Mean	SD	Interpretation
1. I understand that contextualizing learning experiences is matching my teaching practices appropriate for learners.	3.66	0.48	Highly Competent
2. I plan my learning activities with due consideration to the individual differences of learners.	3.64	0.52	Highly Competent
3. I identify contextualized learning opportunities that would relate to my learners' real world.	3.69	0.49	Highly Competent
4. I design learning activities that are engaging in the learners' context.	3.63	0.51	Highly Competent
5. I cite practical examples when I teach.	3.82	0.39	Highly Competent
6. I develop my assessment tools like quizzes, assignments, and projects aligned to the purposes of contextualization itself.	3.60	0.54	Highly Competent
7. I value learners' practical applications of learning by allowing them to interact/relate the best they can.	3.76	0.43	Highly Competent
8. I encourage the use of indigenous materials for their projects and/or performance tasks.	3.49	0.59	Highly Competent
9. I discuss my lessons by linking them to experiences that interest them or they are familiar with.	3.76	0.43	Highly Competent
10. I foster an atmosphere for better adaptability of learners in the classroom by way of collaborating and/or grouping.	3.67	0.51	Highly Competent
Total Measure	3.67	0.34	Highly Competent

**Note:** 1.00-1.75 Not at all (Not competent at all)  
 1.76-2.50 Less Extent (Less Competent).  
 2.51-3.25 Moderate extent (Competent).  
 3.26-4.00 Great extent (Highly competent).

Thus, the results indicate that the teachers in this sample have a high level of competence in contextualizing learning experiences. Teachers should continue to use this approach to make learning more meaningful and relevant to learners, and they may need to further develop their competence in using indigenous materials for projects and performance tasks.

Other than that, the extant call of the Department of Education (DepEd) among its teachers to go on contextualization is still enforced, if not encouraged by virtue of Republic Act (RA) 10533 specifically in Section 10.2

of the Implementing Rules and Regulations (IRR) of the same law states that “Curriculum shall be contextualized and be flexible enough to enable and allow schools to localize and enhance the curriculum based on their respective educational and social contexts”. DepEd then defines contextualization as educational processes relating the curriculum to a particular setting, situation, or application area to make the competencies relevant, meaningful, and valuable to all learners. And the teachers themselves fully- well understood the importance and benefits of contextualization in teaching and learning.

Table V presents the results of the level of pedagogical knowledge competence of teachers in terms of teaching strategies used. The data shows that the teachers are highly competent in utilizing various teaching strategies in their classrooms. The mean score of all indicators is 3.65, which is highly competent.

The teachers have high competence in employing hands-on learning, promoting meaningful learning experiences, allowing reflective learning, and arranging performance tasks to be relatable to learners' contexts. They are also highly competent in establishing a good rapport with their learners, sustaining their attention and interests, and strategizing for collaborative learning.

**Table 5.** Level of Pedagogical Knowledge Competence in Terms of Teaching Strategies Used.

Indicators	Mean	SD	Interpretation
1. I employ hands-on learning.	3.62	0.54	Highly Competent
2. I strategize for collaborative learning in my classroom, or even in off-class sessions.	3.56	0.54	Highly Competent
3. I emphasize mastery in the learning competencies by utilizing contexts that are familiar to the learners themselves	3.57	0.51	Highly Competent
4. I promote meaningful learning experiences.	3.71	0.48	Highly Competent
5. I allow reflective learning.	3.63	0.58	Highly Competent
6. I engage learners to do performance-related activities whenever possible.	3.71	0.46	Highly Competent
7. I arrange performance tasks to be 'relatable' to my learners' context.	3.73	0.48	Highly Competent
8. I exercise due diligence and/or social consciousness in handling the diverse contexts/backgrounds of my learners.	3.51	0.56	Highly Competent
9. I establish a good rapport with my learners.	3.75	0.45	Highly Competent
10. I make efforts to sustain the attention and interests of my learners.	3.72	0.46	Highly Competent
Total Measure	3.65	0.36	Highly Competent

**Note:** 1.00-1.75 Not at all (Not competent at all).  
 1.76-2.50 Less Extent (Less Competent).  
 2.51-3.25 Moderate extent (Competent).  
 3.26-4.00 Great extent (Highly competent).

However, the same Table above cited that the teachers scored less in exercising due diligence and/or social consciousness in handling the diverse contexts/backgrounds of their learners. This implies that there is still room for improvement in the teachers' sensitivity to the diverse contexts and backgrounds of their learners.

The implication of this result is that the teachers have a good understanding and implementation of various teaching strategies in their classrooms. This indicates that the teachers have developed a repertoire of effective teaching strategies that can facilitate meaningful learning experiences for their learners. However, teachers need to be more mindful of their learners' diverse contexts and backgrounds to create a more inclusive and culturally responsive learning environment.

Further, this result implies that generally as perceived by teachers themselves, they possessed a remarkable pedagogical knowledge competence in employing teaching strategies in teaching to ensure effective learning, including “selecting appropriate teaching materials, imparting suitable methodologies, and setting up targeted examinations”

Table 6 on the next page shows the results of the respondents' self-assessment of their pedagogical knowledge competence in terms of ICT integration. Overall, the respondents rated themselves as highly competent, with a total measure of 3.36 and a standard deviation of 0.48.



Among the indicators, the respondents rated themselves as highly competent in understanding the role of ICT in the achievement of their instructional objectives, using their ICT know-how to better communicate best practices in teaching and learning, integrating ICT to improve teaching and learning methods, being mindful of the choice and appropriateness of ICT, and showing sound judgment in embedding/integrating ICT in their lessons.

**Table 6.** Level of Pedagogical Knowledge Competence in Terms of ICT Integration.

Indicators	Mean	SD	Interpretation
1. I understand the role of ICT in the achievement of my instructional objectives.	3.72	0.48	Highly Competent
2. I skillfully use my 'know-how' in ICT to better communicate best practices in teaching and learning.	3.46	0.63	Highly Competent
3. I integrate ICT in the assessment of learning	3.37	0.63	Highly Competent
4. I integrate ICT to better improve teaching and learning methods.	3.50	0.61	Highly Competent
5. I am mindful of the choice and appropriateness of ICT that I integrate into my class.	3.53	0.56	Highly Competent
6. I assist my learners to better adapt to the kind of ICT I integrate into my class.	3.32	0.65	Highly Competent
7. I can troubleshoot common/basic problems when it comes to ICT that I do integrate into my class.	3.12	0.72	Competent
8. I design ICT that would allow meaningful interactions with my learners.	3.22	0.72	Competent
9. I introduce the use of digital simulation and other online/free applications/platforms in my class whenever applicable.	3.09	0.75	Competent
10. I show a sound judgment of the application of the principles and design when I embed/integrate ICT in the creation of my lessons, like PowerPoint presentations and/or video/audio lesson recordings.	3.30	0.65	Highly Competent
Total Measure	3.36	0.48	Highly Competent

**Note:** 1.00-1.75 Not at all (Not competent at all).  
 1.76-2.50 Less Extent (Less Competent).  
 2.51-3.25 Moderate extent (Competent).  
 3.26-4.00 Great extent (Highly competent).

On the other hand, the respondents rated themselves as competent in assisting their learners to adapt to the kind of ICT integrated into their class, designing ICT that would allow meaningful interactions with learners, troubleshooting common/basic ICT problems, and introducing the use of digital simulation and other online/free applications/platforms in their class whenever applicable. These indicators suggest quite a complex task in ICT integration, in the sense that troubleshooting, designing, and introducing digital simulation are no ordinary technical skills in ICT or in digital literacy in general. However, the same skills are accounted for in digital literacy, where it is not only encouraged but is required of every teacher. IIEP-UNESCO cited the importance of ICT integration in education, emphasizing that it can impact student learning. Thus, when teachers are digitally literate and understand how to integrate it into the curriculum. As such, these approaches can lead to higher-order thinking skills, provide creative and individualized options for students to express their understandings, and leave students better prepared to deal with ongoing technological change in society and the workplace.

The results indicate that the respondents have a good understanding of the role of ICT in teaching and learning and are highly competent in integrating ICT into their teaching practices. However, there is still room for improvement in terms of assisting learners to adapt to the ICT used in class, designing ICT for meaningful interactions, troubleshooting common/basic ICT problems, and introducing the use of digital simulation and other online/free applications/platforms in class.

Lastly, the implications of the findings suggest that educators should continuously develop their skills in ICT integration to keep up with the ever-changing technological landscape. Educators should also focus on providing meaningful interactions with their learners through the use of ICT and introducing new and innovative tools and applications to enhance the learning experience. Lastly, educators should ensure that their learners are well-equipped to use ICT in their learning and are provided with the necessary support to address any problems that may arise.

Table VII shows the consolidated findings of the level of pedagogical knowledge competence across three areas: contextualizing learning experiences, teaching strategies used, and ICT integration. The mean scores for all

three areas are in the highly competent range, with scores ranging from 3.36 to 3.67. The overall total measure of pedagogical knowledge competence is also in the highly competent range, with a mean score of 3.56.

**Table 7.** Consolidated Findings of the Level of Pedagogical Knowledge Competence.

<b>Pedagogical Knowledge Competence</b>	<b>Mean</b>	<b>SD</b>	<b>Interpretation</b>
Contextualizing Learning Experiences	3.67	0.34	Highly Competent
Teaching Strategies Used	3.65	0.36	Highly Competent
ICT Integration	3.36	0.48	Highly Competent
Total Measure	3.56	0.34	Highly Competent

**Note:** 1.00-1.75 Not at all (Not competent at all).  
 1.76-2.50 Less Extent (Less Competent).  
 2.51-3.25 Moderate extent (Competent).  
 3.26-4.00 Great extent (Highly competent).

Implications of these findings are that the teachers in the study possess a high level of pedagogical knowledge competence across different areas. This is a positive outcome, as it suggests that the teachers are well-equipped to provide effective teaching and learning experiences for their students. The results suggest that the teachers have a good understanding of how to contextualize learning experiences, employ effective teaching strategies, and integrate ICT into their teaching.

Table 8 indicates that the level of organizational citizenship of the teachers in terms of occupational efficacy is observed to a great extent. The mean scores for all indicators are above 3.5, which indicates that the teachers are performing well in terms of their occupational efficacy and displaying positive behaviors in their workplace.

Teachers who reported achieving well the goals that they set for themselves at work (Indicator 1) and taking charge of whatever comes their way at work (Indicator 2) scored the highest means among all indicators. This indicates that the teachers are self-driven and have a sense of ownership in their work. Teachers who reported being ready for most of the demands of their work (Indicator 4) and usually finding solutions whenever problems arise at work (Indicator 7) also scored high means, indicating their ability to adapt to changing work demands and problem-solve effectively.

In terms of interpersonal relationships at work, teachers reported getting along well with people of diverse experiences (Indicator 8), varying ages (Indicator 9), and different backgrounds (Indicator 10). They also reported getting along well with their immediate superiors at work (Indicator 11). This suggests that teachers are exhibiting positive behaviors that promote a healthy work environment and foster positive relationships with their colleagues and superiors.

Furthermore, teachers reported exerting more effort to seek out help or advice at work when much needed (Indicator 13) and learning new ways to better improve their performance at work (Indicator 12), indicating a growth mindset and willingness to learn and improve.

However, Indicator 14, which measured the teachers' ability to maintain grace and composure under pressure or stress, scored a lower mean compared to other indicators. This may suggest that stress management could be an area of improvement for some teachers.

Essentially, it is noteworthy that teachers have sustained an incredible extent of occupational efficacy despite the demands of the teaching profession. During the data gathering of the researcher in one of the biggest schools and largest sample drawn so far, it can be observed that teachers are jam-packed in one small-sized holding room called a faculty office, with less than an arm-breadth table provided for about 20-25 teachers, ventilated with 1 or 2 electric fans but well-lighted though. The passage aisle is narrow that it is one-way traffic inside the room, not enough filing cabinets, and physically, it can be described as 'messy', and the room itself is not befitting as 'workable' or livable as a faculty room. Yet, despite the unfavorable physical condition of the teachers' workplace, it did not affect their occupational efficacy. In other words, it can be implied that teachers' occupational efficacy is not

dependent nor is lessened by the kind of workplace, and perhaps because occupational efficacy is something that is internal or a sort of personal attribute or values within the teachers themselves.

**Table 8.** Level of Organizational Citizenship of the Teachers in Terms of Occupational Efficacy.

Indicators	Mean	SD	Interpretation
1. I am achieving well the goals that I set for myself at work.	3.60	0.51	To a great extent observable
2. I am usually taking charge of whatever comes my way at work.	3.70	0.46	To a great extent observable
3. My work experiences have prepared me well for my work now.	3.69	0.55	To a great extent observable
4. I am ready for most of the demands of my work.	3.58	0.56	To a great extent observable
5. I am keeping my cool whenever I encounter problems at work.	3.55	0.53	To a great extent observable
6. I am relying on my abilities whenever problems arise at work.	3.54	0.56	To a great extent observable
7. I am usually finding solutions whenever problems arise at work.	3.71	0.49	To a great extent observable
8. I get along well at work with people of diverse experiences.	3.70	0.46	To a great extent observable
9. I get along well at work with people of varying ages.	3.73	0.45	To a great extent observable
10. I get along well at work with people of different backgrounds.	3.71	0.47	To a great extent observable
11. I get along well with my immediate superiors at work.	3.72	0.48	To a great extent observable
12. I am learning new ways to better improve my performance at work.	3.78	0.43	To a great extent observable
13. I exert more effort to seek out help (and/or advice) at work when much needed.	3.81	0.40	To a great extent observable
14. I have grace (and composure) under pressure or stress at work.	3.51	0.56	To a great extent observable
15. I am efficacious (or effective) in dealing with my clients at work.	3.57	0.54	To a great extent observable
Total Measure	3.66	0.32	To a great extent observable

**Note:**  
 1.00-1.75 Never (Not all observable).  
 1.76-2.50 Rarely (Less observable).  
 2.51-3.25 Sometimes (Somewhat observable).  
 3.26-4.00. Always (To a great extent observable).

Hence, the results suggest that the teachers in this study display positive organizational citizenship behaviors and occupational efficacy. The implications of these findings are that schools and educational institutions should acknowledge and support these positive behaviors and provide opportunities for professional growth and development to sustain and further enhance teacher efficacy and positive behaviors in the workplace.

Further, Table 9 on the succeeding page presents the level of organizational citizenship of the teachers in terms of collective efficacy. The mean score for the total measure is 3.78, which means that the teachers demonstrate organizational citizenship behaviors to a great extent observable.

In terms of specific indicators, the highest mean score is for supporting teamwork at work (M=3.86), indicating that teachers prioritize collaboration with their colleagues. Additionally, they also show a high level of respect for work schedules and deadlines (M=3.81), uphold, and protect the interests of their organization (M=3.81), and love to collaborate with others at work (M=3.82). These behaviors are essential for creating a positive and productive work environment, where teachers can work together effectively to achieve the organization's goals.

**Table 9.** Level of Organizational Citizenship of the Teachers in Terms of Collective Efficacy.

Indicators	Mean	SD	Interpretation
1. I uphold and/or protect the interests of my organization.	3.81	0.40	To a great extent observable
2. I help achieve organizational vision, mission, and goals.	3.76	0.45	To a great extent observable
3. I have high regard for the competencies of others at work.	3.74	0.45	To a great extent observable
4. I support teamwork at work.	3.86	0.36	To a great extent observable
5. I love to collaborate with others at work.	3.82	0.39	To a great extent observable
6. I set aside personal issues at work.	3.82	0.40	To a great extent observable
7. I display a true concern with others at work even under unfavorable work-related situations.	3.74	0.45	To a great extent observable
8. I display due courtesy with people in my organization even under unfavorable work-related situations.	3.78	0.44	To a great extent observable
9. I extend time (and effort) to help/assist others to do their work.	3.72	0.46	To a great extent observable
10. I respect work schedules and deadlines at work	3.81	0.39	To a great extent observable
11. I take time to finish assigned work and tasks for me at work.	3.73	0.48	To a great extent observable
12. I sow unity at work through my words and actions.	3.75	0.45	To a great extent observable

13. I set myself a good example (in terms of productive work attitudes) at work.	3.63	0.53	To a great extent observable
14. I peaceably work with others at the workplace.	3.85	0.37	To a great extent observable
15. I believe in the competencies/expertise of others to bring out organizational success	3.86	0.35	To a great extent observable
Total Measure	3.78	.29	To a great extent observable

**Note:** 1.00-1.75 Never (Not all Observable).  
 1.76-2.50 Rarely (Less observable).  
 2.51-3.25 Sometimes (Somewhat observable).  
 3.26-4.00. Always (To a great extent observable).

On the other hand, the lowest mean score is for setting oneself a good example (in terms of productive work attitudes) at work (M=3.63), indicating that some teachers may not always display ideal work attitudes. However, the score is still within the range of "to a great extent observable." It suggests that teachers still exhibit desirable behaviors, but there is still room for improvement in terms of modeling positive work attitudes.

The results imply that the teachers demonstrate a high level of organizational citizenship behavior, indicating their commitment and dedication to the organization's success. The results also suggest that the teachers prioritize collaboration and teamwork, which can foster a positive work environment that enhances productivity and job satisfaction. The findings can be useful for educational leaders and policymakers to develop strategies to maintain and improve organizational citizenship behavior among teachers, leading to better organizational outcomes.

Be that as it may, organizational citizenship can take the form of manifesting both occupational efficacy (OE), which is directly inherent to oneself or personal, and collective efficacy (CE) as something external. Eden (2001) defined CE as an "individual's belief in the capacity of her or his team, department, division, or another relevant organizational unit to execute the courses of action required for performing its mission effectively." So then, if CE is more dependent on how an individual relates with the external condition in his/her workplace, and OE is something that is internal or as to how else the individual intra-personally and self-efficaciously takes his/her work to success or desired performance and productivity. Thus, CE is something external, or as how else the individual inter-personally and self-efficaciously takes his/her work to success or desired performance and productivity given other circumstances and factors that are beyond his/her control that directly or indirectly affect it, e.g., resources available, and support from the administration or from co-employees themselves, and even workplace condition.

Table 10 shows the consolidated findings of the level of organizational citizenship of the teachers in terms of occupational efficacy, collective efficacy, and the total measure. The mean score for occupational efficacy is 3.66 with a standard deviation of 0.32, indicating that the teachers to a great extent demonstrate behaviors that promote their personal efficacy in the workplace.

**Table 10.** Consolidated Findings of the Level of Organizational Citizenship of the Teachers.

Indicators	Mean	SD	Interpretation
Occupational Efficacy	3.66	0.32	To a great extent observable
Collective Efficacy	3.78	0.29	To a great extent observable
Total Measure	3.72	0.28	To a great extent observable

**Note:** 1.00-1.75 Never (Not all observable).  
 1.76-2.50 Rarely (Less observable).  
 2.51-3.25 Sometimes (Somewhat observable).  
 3.26-4.00. Always (To a great extent observable).

The mean score for collective efficacy is 3.78 with a standard deviation of 0.29, indicating that the teachers to a great extent demonstrate behaviors that promote their collective efficacy as a group. The mean score for the total measure is 3.72 with a standard deviation of 0.28, indicating that the teachers to a great extent demonstrate behaviors that promote organizational citizenship.

These results suggest that the teachers in this study exhibit a high level of organizational citizenship. They consistently demonstrate behaviors that support both their personal and collective efficacy in the workplace, and they uphold and protect the interests of the organization. The findings also imply that the teachers have a positive

attitude towards their work, and they are willing to collaborate with others, set aside personal issues, and extend time and effort to help their colleagues.

The implications of these results are that the school administration should continue to support and encourage the teachers in exhibiting organizational citizenship behaviors. These behaviors are essential for creating a positive work environment and fostering a culture of teamwork and collaboration. Teachers who exhibit organizational citizenship behaviors are more likely to be satisfied with their work, have higher levels of commitment to their organization, and contribute to the overall success of the school. Furthermore, the findings suggest that the school administration should provide opportunities for professional development that promote personal and collective efficacy among teachers. By doing so, the school can create a culture of continuous improvement and support the growth and development of its teachers.

Table 11 on the succeeding pages presents the correlation analysis results of the relationship between the pedagogical knowledge competence of teachers and their organizational citizenship, as measured by occupational efficacy, collective efficacy, and the total measure of organizational citizenship. The results indicate significant positive correlations between teachers' pedagogical knowledge competence and organizational citizenship. This result is affirmed by the study conducted in Indonesia by Dewanti, Moko & Sudjatno (2018) entitled, The Role of Organizational Citizenship Behavior (OCB) and Organizational Commitments in Mediation between Competence with Honorer Teacher Performance (Study at State Middle School in Kediri City) who concluded on the effect between the significant effect of competence on OCB. This means that competence is an important variable in increasing honorary teacher OCB at the level of state junior high schools in the city of Kediri. They further cited that their result of the study was in line with the opinion of Wibowo (2007) who stated that the competence of a person about himself will greatly affect a person's behavior to do work that exceeds the limits of his/her ability.

Specifically, the contextualizing learning experiences of teachers showed a significant positive correlation with occupational efficacy ( $r = .494, p < .001$ ), collective efficacy ( $r = .534, p < .001$ ), and the total measure of organizational citizenship ( $r = .554, p < .001$ ). This finding suggests that teachers who are competent in contextualizing learning experiences are more likely to demonstrate occupational and collective efficacy and engage in organizational citizenship behaviors.

The teaching strategies used by teachers also showed significant positive correlations with occupational efficacy ( $r=.553, p<.001$ ), collective efficacy ( $r=.504, p<.001$ ), and the total measure of organizational citizenship ( $r=.573, p<.001$ ). This finding suggests that teachers who use effective teaching strategies are more likely to demonstrate occupational and collective efficacy and engage in organizational citizenship behaviors.

Similarly, the integration of ICT in teaching showed significant positive correlations with occupational efficacy ( $r=.346, p<.001$ ), collective efficacy ( $r=.263, p<.001$ ), and the total measure of organizational citizenship ( $r=.331, p<.001$ ). This finding indicates that teachers who integrate ICT into their teaching are more likely to demonstrate occupational and collective efficacy and engage in organizational citizenship behaviors.

**Table 11.** Relationship between the Pedagogical Knowledge Competence of Teachers and Their Organizational Citizenship.

Variables	Occupational Efficacy		Collective Efficacy		Total Measure (Organizational Citizenship)	
	R-Value (P-Value)	Remarks	R-Value (P-Value)	Remarks	R-Value (P-Value)	Remarks
Contextualizing Learning Experiences	0.494*** (0.000)	Significant	0.534*** (0.000)	Significant	0.554*** (0.000)	Significant
Teaching Strategies Used	0.553*** (0.000)	Significant	0.504*** (0.000)	Significant	0.573*** (0.000)	Significant
ICT Integration	0.346*** (0.000)	Significant	0.263*** (0.000)	Significant	0.331*** (0.000)	Significant
Total Measure (Pedagogical Knowledge)	0.526*** (0.000)	Significant	0.481*** (0.000)	Significant	0.545*** (0.000)	Significant

Note: \*\*\* $p < .001$ .

Finally, the total measure of pedagogical knowledge competence showed significant positive correlations with occupational efficacy ( $r=.526, p<.001$ ), collective efficacy ( $r=.481, p<.001$ ), and the total measure of organizational citizenship ( $r=.545, p<.001$ ). This finding suggests that teachers who have higher levels of pedagogical knowledge competence are more likely to demonstrate occupational and collective efficacy and engage in organizational citizenship behaviors.

These findings have important implications for teacher education and professional development programs. Teacher education programs should focus not only on developing pedagogical knowledge and teaching skills but also on fostering organizational citizenship behaviors among teachers. Professional development programs should also emphasize the importance of effective teaching strategies, contextualizing learning experiences, and the integration of ICT in teaching to enhance teachers' occupational and collective efficacy and encourage their engagement in organizational citizenship behaviors.

Table 12 on the succeeding pages reveals that both age (22-32) and pedagogical knowledge competence are significant predictors of organizational citizenship. The coefficient for age is negative ( $B=-.199, t=-2.468, p=.014$ ), indicating that older teachers tend to have higher perceived organizational citizenship compared to younger teachers. The coefficient for pedagogical knowledge competence is positive ( $B=.514, t=4.518, p<.001$ ), suggesting that teachers who have a higher perceived pedagogical knowledge competence tend to have higher organizational citizenship efficacy.

However, the interaction between age and pedagogical knowledge competence is not significant. This means that age does not moderate the relationship between pedagogical knowledge competence and organizational citizenship.

Overall, the model explains 30.5% of the variance in organizational citizenship. The ANOVA results show that the model is statistically significant ( $F=17.641, p<.001$ ). The findings suggest that pedagogical knowledge competence is an important factor in predicting organizational citizenship, regardless of their age.

**Table 12.** Regression Analysis to Examine If Age Presents a Moderator Variable for Pedagogical Knowledge Competence and Organizational Citizenship.

Model	Coefficients			T-value	P-Value	Remarks
	Unstandardized Coefficients		Standardized Coefficients			
	B	S.E.	$\beta$			
(Constant)	3.802	0.042	--	91.125	0.000	Significant
Age=22-32 ( $A_1$ )	-0.121	0.049	-0.199	-2.468*	0.014	Significant
Age=33-43 ( $A_2$ )	-0.083	0.048	-0.140	-0.1721	0.086	Not significant
Age=44-54 ( $A_3$ )	-0.074	0.053	-0.106	-1.415	0.158	Not significant
Age=55-65 (Ref)	--	--	--	--	--	--
Pedagogical Knowledge Competence (PKC)	0.146	0.032	0.514	4.518***	0.000	Significant
Interaction						
$A_1$ *PKC	0.023	0.043	0.043	0.545	0.586	Not significant
$A_2$ *PKC	0.016	0.041	0.032	0.381	0.704	Not significant
$A_3$ *PKC	0.008	0.048	0.012	0.171	0.864	Not significant

**Note:** <sup>a</sup>Dependent Variable: Organizational Citizenship ANOVA for Regression=17.641,  $p<.001$

\*\*\* $p<.001$

\*\* $p<.01$

Adjusted  $R^2 = .305$  Ref-Reference category.

The implications of these results are that educational institutions should focus on improving the pedagogical knowledge competence of their teachers as a means of enhancing their organizational citizenship. This can be done through providing professional development opportunities, mentorship programs, and other forms of support to help teachers acquire and develop the necessary skills and knowledge. In addition, institutions can create a culture of collaboration and shared responsibility to promote organizational citizenship among teachers.

Table XIII presents the results of the regression analysis examining if sex moderates the relationship between pedagogical knowledge competence (PKC) and organizational citizenship. The results show that PKC has a significant positive effect on organizational citizenship ( $\beta = 0.833$ ,  $p < .001$ ), indicating that higher levels of PKC are associated with higher levels of organizational citizenship.

**Table 13.** Regression Analysis to Examine If Sex Presents a Moderator Variable for the Pedagogical Knowledge Competence and Organizational Citizenship.

Model	Coefficients			T-Value	P-Value	Remarks
	Unstandardized Coefficients		Standardized Coefficients			
	B	S.E.	$\beta$			
(Constant)	3.678	0.027	--	135.320	0.000	Significant
Sex = Female	0.055	0.032	0.087	1.740	0.083	Not significant
Sex = Male (Ref)	--	--	--	--	--	--
Pedagogical Knowledge Competence (PKC)	0.237	0.028	0.833	8.546***	0.000	<b>Significant</b>
Interaction						
Sex*PKC	-0.108	0.032	-0.327	-3.356***	0.001	<b>Significant</b>

**Note:** <sup>a</sup>Dependent Variable: Organizational Citizenship ANOVA for Regression=45.318,  $p < .001$   
 \*\*\* $p \leq .001$  Adjusted  $R^2 = .333$  Ref-Reference category.

In addition, the interaction between sex and PKC is significant ( $\beta = -0.327$ ,  $p = .001$ ), suggesting that the relationship between PKC and organizational citizenship differs between males and females. Specifically, the negative coefficient for the interaction term indicates that the effect of PKC on organizational citizenship is weaker for females than for males.

The non-significant coefficient for sex ( $\beta = 0.087$ ,  $p = .083$ ) indicates that there is no significant difference in the level of organizational citizenship between males and females, after controlling for PKC.

These findings have important implications for organizations and their employees. They suggest that organizations should invest in developing the pedagogical knowledge competence of their employees, as this is positively associated with their level of organizational citizenship. Additionally, organizations should be aware that the effect of PKC on organizational citizenship may differ based on employees' sex, with the effect being weaker for females than for males. Therefore, organizations may want to consider tailoring their training and development programs to better support female employees in developing their PKC and enhancing their level of organizational citizenship.

Table 14 on the following page presents the results of the moderated regression analysis for the effect of the type of professional teacher certification on the relationship between pedagogical knowledge competence (PKC) and organizational citizenship. The results indicate that the type of professional teacher certification does not moderate the relationship between PKC and organizational citizenship, as the interaction effect is not significant ( $\beta = -.076$ ,  $t = -.875$ ,  $p = .382$ ). However, PKC is a significant predictor of organizational citizenship ( $\beta = .613$ ,  $t = 7.031$ ,  $p < .001$ ).

These findings indicate that regardless of the type of professional teacher certification, having higher levels of PKC is associated with higher levels of organizational citizenship. Therefore, efforts to enhance teachers' PKC could potentially lead to increased levels of organizational citizenship, which in turn, can improve the overall functioning and effectiveness of the educational institution.

**Table 14.** Regression Analysis to Examine If Type of Professional Teacher Certification Presents a Moderator Variable for the Pedagogical Knowledge Competence and Organizational Citizenship.

Model	Coefficients <sup>a</sup>			T-Value	P-Value	Remarks
	Unstandardized Coefficients		Standardized Coefficients			
	B	S.E.				
(Constant)	3.703	0.026	--	140.029	0.000	Significant
Type = Traditional route	0.023	0.032	0.037	0.727	0.468	Not significant
Type=Alternative route (Ref)	--	--	--	--	--	--
Pedagogical Knowledge Competence (PKC)	0.174	0.025	0.613	7.031	0.000	Significant
Interaction						
Type*PKC	-0.027	0.031	-0.076	-0.875	0.382	Not significant

**Note:** <sup>a</sup>Dependent Variable: Organizational Citizenship ANOVA for Regression=39.112, p<.001

\*\*\*p<.001 Adjusted R<sup>2</sup> = .301 Ref-Reference category.

The cited finding above was affirmed by the results of the study conducted by Research Services Information of Miami-Dade County Public Schools in 2012 that there is great variation in the quality of alternative certification programs and comparisons across programs are difficult. In addition, participants tend to experience the same program in dramatically different ways, depending upon their educational backgrounds, past experiences, knowledge, attitudes, and beliefs. In other words, many factors contribute to a teacher's effectiveness, including the school to which they are assigned, their years of teaching experience, and their content area knowledge, attitudes, and beliefs. The route through which certification is obtained is just one of these factors.

## 5. CONCLUSIONS

Based on the findings of the study, the following conclusions are drawn:

1. The demographics of the teachers like age and the type of professional teacher certification are not moderating the relationship between pedagogical knowledge competence (PKC) and organizational citizenship (OC) but sex is.
2. The PKC in terms of ICT integration seemingly is wanting along the areas of troubleshooting, designing, and introducing digital simulation in the class.
3. The PKC had a significant positive effect on OC, thus, the higher levels of PKC are associated with higher levels of OC.

## 6. RECOMMENDATIONS

In the light of the aforementioned findings and conclusions of the study, the following are the recommendations:

1. Further studies may be pursued relative to identifying other moderating variables that would affect the relationship between pedagogical knowledge competence and organizational citizenship.
2. A capability-building workshop seminar may be undertaken to address the needs in the areas of troubleshooting, designing, and introducing digital simulation in the class.
3. The school administration may develop strategies to maintain and enrich pedagogical knowledge competence and organizational citizenship behavior among teachers, leading to better organizational outcomes. They shall continue to support and encourage the teachers in exhibiting organizational citizenship behaviors. These behaviors are essential for creating a positive work environment and fostering a culture of teamwork and collaboration. Furthermore, the school administration will provide opportunities for professional development that promote occupational and collective efficacy among teachers. By doing so, the school can create a culture of continuous improvement and support the growth and development of its teachers.



## Conflict of Interest

The author declares no conflict of interest.

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