



Influence of Perceptions and Preparedness of Senior High School Teachers based on their Qualifications towards Professional Teacher Licensing in Ghana

Samuel Obed Amoah¹

Francis Britwum^{2*}

Kenneth Adu-Gyamfi³

Francis Nyamekye⁴

Palmas Anyagre⁵

Paul Dela Ahiatrogah⁶

¹Tutor, St. Monica's College of Education, Department of Education Studies, Ghana.

^{2*}Student, University of Cape Coast, Department of Education and Psychology, Ghana.

³Email: franskye29@yahoo.com

⁴Lecturer, University of Cape Coast, Department of Science Education, Ghana.

⁵Lecturer, University of Cape Coast, Department of Education and Psychology, Ghana.

⁶Head of Academics, University of Cape Coast, College of Distance Education, Ghana.

Abstract

The study sought to explore the influence of perceptions and preparedness of senior high school teachers based on their qualifications towards professional teacher licensing in Ghana. The study was motivated by three research hypotheses. A sample size of 278 senior high school teachers in Ashanti, Ghana region was selected using multi-stage sampling technique. Data were analysed using independent sample t-test and one-way ANOVA to answer the research hypotheses. The study revealed that male and female teachers had similar perceptions and preparation towards the teacher licensing. This was because male teachers did not differ significantly compared to their female counterparts on teachers' perceptions and preparedness towards the teacher licensing in Ghana. The study also found that teachers who hold a bachelor degree have similar perceptions and perceived preparedness towards the teacher licensing policy compared to certificate 'A', diploma, and post-graduate degree holders. This is because one-way between-groups ANOVA test shows that the teachers did not differ statistically in their perceptions and perceived preparedness towards teacher licensing in Ghana in relation to teacher qualification. The study recommended that outreach unit of GES should use the mass media and profession development to help teachers have answers to their questions about the policy. The study again recommended that GES and teacher unions should use professional development programmes to educate and prepare teachers for the implementation of the policy.

Keywords:

Perception
Preparedness
Qualification.

Licensed:

This work is licensed under a Creative Commons Attribution 4.0 License.

Publisher:

Scientific Publishing Institute

Received: 26 June 2020

Revised: 17 June 2020

Accepted: 7 July 2020

Published: 24 August 2020

Funding: This study received no specific financial support.

Competing Interests: The authors declare that they have no competing interests.

1. Introduction

Education has no end and in the light of advancement in the world, human resource development keep on changing. Accordingly, some studies mentioned that for effective teaching to be achieved, it is important to train teachers to carry out such duty (Asare, 2009; Quansah & Ankoma-Sey, 2020). In an attempt to attain

this, the Sustainable Development Goal (SDG) 4 seeks to promote all-inclusive and equitable quality education, and endorses continuous learning opportunities for all (Quansah & Ankoma-Sey, 2020). Consequently, the role of teachers cannot be underestimated. Again, there is the need for ensuring ethical and professionalism which requires identification and licensing without these, a professions integrity and standards is questionable.

In relation to achieving the SDG4, improve and revitalize schooling in Ghana, the country employed teacher training at the pre-university stage to realize such a goal. The implementation of teacher licenses at the pre-tertiary stage, in one word, would promote discipline in the teaching profession and will enhance the success of the students. A profession is an occupation seeking accreditation and licensing to regulate itself by building consensus on what its practitioners need to know, do and pass on knowledge and skills (Schein, 2017; Suskind & Suskind, 2015). When organizations such as institutions, business organisations, state agencies, and the public accept that system, an occupation becomes a profession. It is thought that professionalism entails numerous synchronized attributes (Lynch, Surdyk, & Eiser, 2004). Professionalism of teachers includes the behavior of instructors, or attributes that define a career. A career is also a calling which needs specialized knowledge with sometimes lengthy and rigorous academic training (Kissock & Richardson, 2010). Perception is the process, recognition and perception of sensory stimuli to reflect and appreciate the experience, whereas preparedness is the condition or state of being prepared for anything to happen. In the other side, registration is a prerequisite that must be fulfilled before a privilege and is an official necessity can be obtained.

Aquino and Balilla (2015) reported that most countries worldwide allow teachers to complete the mandatory certification test before being deemed skilled and eligible for jobs and be granted a licensed teacher title. It could be no different from the path that schooling is going in Ghana. This is because if students are still perceived to be involved in the educational sector and wish to take a step into potential economic development, then the importance of teacher licensing cannot be diminished. Licensing teachers can serve as a panacea to poor performance among students in Ghana.

Cunningham and Allington (2003) and Darling-Hammond (2000) felt that each school's crucial objective was to achieve and achieve its students. Hence, efforts such as certified trained and skilled teachers will then be made possible to consistently increase student achievement, since what teachers learn and can do in the classroom is the most important element in growing student achievement (Darling-Hammond, 2000). It is obvious that improving the performance of the students depends on the teachers' skills and quality. Through professional teacher licensing, those qualities can be achieved and sustained. Mark, Conn, Gwen, and Bernadette (2006) found that most teachers considered licensing standards to be important facets of their professional growth and survival, around 89 percent. In their study the teachers observed that, like every other approved occupation, teaching requires training before one can work. Others emphasized that the standards and license tests required ensure teachers are well trained and competent.

A professional teaching license is the highest mark of professional achievement which makes the teacher a member of a larger network of accomplished teachers who shape the profession (Acosta & Acosta, 2016). The National Board for Qualified Teaching Standards has suggested that teacher certification serves to prove that a teacher has achieved all the requirements needed for the position and will promote the instructor to a fully educated career. Therefore, licensing is an essential factor for maintaining consistency of the teaching workforce. Licensing helps to establish the platform for distinguishing between those who have the desired level of ability to start practice and those who do not. Licensing is seen as being used by many vocations to accentuate the skills required and the aptitude that one needs to have before it can function effectively and efficiently (Acosta & Acosta, 2016). It is against this background that this study intended to investigate the influence of perceptions and preparedness of senior high school teachers based on their qualifications towards professional teacher licensing in Ghana.

1.1. Statement of the Problem

Parents, educators, and policy-makers are concerned about teacher preparation for teacher licensing policy programs (Carr, 2013). Research data suggest that without assessments, guidelines or policies for teacher preparation programmes, teacher preparation and school-level learning performance indicators could be reduced (Coggshall, Rasmussen, Colton, Milton, & Jacques, 2012). Acosta and Acosta (2016) indicated that various occupations, including education, are utilizing licensing programs to exclude individuals from their sectors and to prohibit others considered unfit from studying. This is because licensing is used as a test of practical skills awareness, subject matter and pedagogy. It suggests that licensing is important in the world of education and the search is far from being a misguided goal for those countries that accept teacher licensing.

In addressing the professional teacher licensing in Ghana, most of the studies conducted have focused on teacher education programs. Studies by Thompson (2010) and Carr (2013) focused on teachers' perceptions and preparedness of teacher education program's. It is therefore important as this study investigate the influence of perceptions and preparedness of senior high school teachers based on their qualifications towards professional teacher licensing in Ghana.

1.2. Research Hypotheses

The following research questions were formulated to guide the conduct of the study:

1. *H₀: There is no statistically significant difference between male teachers' perceptions and those of females, regarding the teacher licensing policy in Ghana.*
2. *H₀: There is no statistically significant difference between male and female teachers' preparedness for teacher licensing in Ghana.*
3. *H₀: There is no statistically significant difference in the perception level in teacher licensing in Ghana based on qualification.*

2. Literature Review

2.1. Conceptual Framework

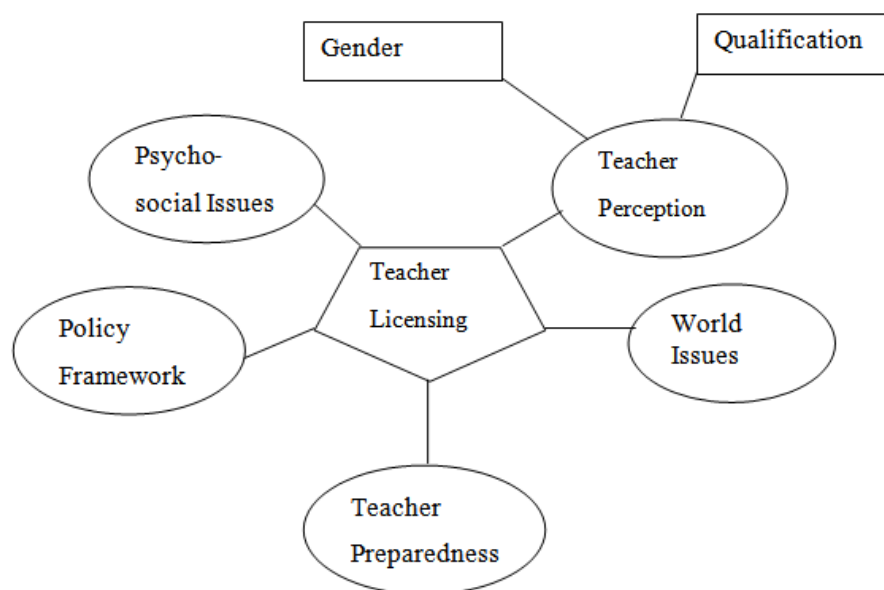


Figure-1. Conceptual framework of factors to consider in teacher licensing.

The Figure 1 shows the factors to consider when implementing licensing policy for teachers. The perception of teachers is an important factor. It explains the hopes and aspirations of the teachers regarding the policy. The teachers' perceptions on the licensing transcend their attitudes to the policy. It is therefore important that the perception of teachers be assessed before any teaching policy is implemented. Sex and training are the two determinants of expectations of teachers as far as teacher licensing is concerned. Based on their orientation, males and females might perceive things differently (Law & Chow, 2008). The qualified teaching career is viewed more favorable to women than to men. This means their perception of anything teaching could differ. When teachers accumulate years of experience, they seem to add less value to the career because they've experienced more in the career than someone with less years of service in the profession. Teachers who have entered newly come in with passion and could have a clear understanding of the teaching and its practices than others who have more years of clinical experience.

Teacher preparedness describes the ability to acknowledge the teacher licensing regulation specifics and conform them to them. The success of every policy implementation requires that those for whom the policy is intended should be made to accept and be ready for the policy. This is important to insure that they (teachers) provided their insight into the program in order to dedicate themselves to it as their own. Another aspect of teacher preparedness ensures that wider meetings, orientations and educations have been undertaken to the extent where the instructor may tell I'm ready for the transition.

Under psychosocial evaluation for teacher certification, determination is required to be made about how the curriculum suits the people's community and religious orientations, as well as public visibility and encouragement. Aside from psychosocial factors, attention should be paid to issues around the world. That is as much the program complies with the latest pattern in worldwide teacher licensing. This is because the village is just one community, a global village, and no nation is an island. So the licensing policy for teachers should be universally acceptable. Lastly, the policy framework is crucial to teacher policy success. This includes government policy in education, role of government, benefits and responsibilities of teachers as far as the teacher licensing is concerned. Before implementing the teacher licensing policy all of these should be known and understood by stakeholders.

2.2. Theoretical Framework

2.2.1. Technology Acceptance Models (TAM)

The Technology Acceptance Model (TAM) from [Davis, Bagozzi, and Warshaw \(1989\)](#) is an information systems theory that discusses how users accept, and start using, a technology or new idea. Davis claimed that there are a number of factors influencing "how and when" users will start using the respective technology when a new technology is introduced to users. These factors are called "perceived utility" (PU) and "perceived user-friendliness" (PEOU). The PU is the factor indicating the degree to which the person believes the information system will help to perform a given job ([Davis et al., 1989](#)). The PEOU is the second factor used to indicate how difficult the person thinks it would be to use the proposed system. Such frameworks are focused on the principle of rational practice, which defined that the behavioral purpose of an individual is decided by the disposition of the individual and by a subjective average calculated by regression. [Holden \(2012\)](#).

According to the model, medical personnel who perceive the EMR to be easy to use, aligned with their professional standards, supported by their coworkers and patients, and able to demonstrate tangible results are more likely to accept this new technology ([Holden, 2012](#)). Some researchers also found that TAM explains that attitudes towards a system are determined by the perception of usefulness and user-friendliness ([Ahmad, 2014](#); [Karahanna & Straub, 1999](#)). Others used the same paradigm but found further terms such as users' 'self-efficacy' and their effect on perceived utility and user-friendliness ([Kowitlawakul, Chan, Pulcini, & Wang, 2015](#)). Other researchers have used the extended version of TAM, the Unified Theory of Acceptance and Use of Technology (UTAUT) ([Venkatesh, Thong, & Xu, 2016](#)), to consider more concepts.

UTAUT describes four main factors (which are expected efficiency, planned commitment, social impact, and circumstances facilitating) and four moderators (which are age, class, expertise, and voluntary) relevant to the estimation of behavioral purpose to use technology and actual technology mainly utilized in organizational contexts ([Im, Hong, & Kang, 2011](#)). According to UTAUT, expectation of success, expectation of commitment and social impact were theorized and found to affect behavioral intent to use a technology, while behavioral purpose and circumstances promoting dictated the use of technology. In addition, various configurations of the four moderators were theorized and found to control specific relationships with UTAUT ([Venkatesh et al., 2016](#)).

The latest element that is being implemented by introducing the Development Adoption Paradigm to the sample is teaching permission and is equivalent to a technical innovation being presented at the moment to another. Although it will be compulsory for all teachers, as licensing is something new it is expected to be more receptive. The theory argues that factors such as expectation of performance, expectation of effort and social influence are key determinants which induce technology utilization. The same factors can affect the readiness and approval of the license by teachers. Acceptance can often be calculated by measuring expected value or significance toward the demerits correlated with licensing. If they know that the Ghana Education Service will no longer use their help and that without the authorization they would be unemployed, so teachers are more likely to be more open to the certificate.

3. Methodology

3.1. Research Design

For this study the descriptive survey was used as it allows the researcher to obtain fresh knowledge and also to explain the phenomena in a vivid way. According to [Amedahe \(2002\)](#) a concise definition of events, objects, processes and individuals is the goal in descriptive research. He further clarified that it deals with understanding and defining the interactions between variables. Descriptive research aims to find answers to the questions through relationship analysis. [Leedy and Ormrod \(2005\)](#) indicated that a concise survey inquiry includes collecting knowledge regarding one or more samples or groups of people concerning their identity, beliefs, character or prior event or perception through making inquiries and providing their responses in a pictorial manner. [Crosswell \(2009\)](#) also conceived that the purpose of a concise survey analysis was to generalize from a sample to a community in order to draw inferences regarding certain population characteristics, behavior, or acts.

3.2. Study Population

The target demographic for the research was the trained teachers in the Ashanti region. Population at the target was 9534. The instructors are all those taught under the Ghana Education Service (GES) at senior high schools in the Ashanti area for the 2017/2018 academic year. The study's attainable population was 988 where samples were collected. In all, 110 teachers from high school were selected for the research.

3.3. Sample and Sampling Technique

The sample size calculation table by [Krejcie and Morgan \(1970\)](#) was used to select the sample from the Ashanti region community of senior high teachers. A sample was conducted of 278 teachers from different senior high schools utilizing multi-stage sampling technique (stratified, purposive, proportional and simple random sampling). Firstly, it stratified the whole territory of Ashanti into Metropolitan, Municipal and

District Assemblies. Ashanti has 1 Metropolitan Area, 7 Municipalities and 22 District Assemblies (Boateng, 2014).

Second, purposeful sampling technique was used to select the seven (7) municipalities from the thirty (30), Metropolitan, Municipal, and District legislatures. This was since there were three or more senior high schools in each municipal council, and thus they had a sufficient number of teachers to engage in the report. Again, this analysis used the seven (7) municipalities, as it includes the characteristics of both metropolitan and district legislatures.

Thirdly, to select three out of the seven municipalities, simple random sampling procedure was used. Fourthly, stratified sampling was used to classify all senior high schools within the three municipalities into schools in grades A, B, C, D and D. The schools were divided among the four school groups accepted by the GES. That provided an impression that the sampled teachers were representative of the target population. The simple random sampling method, which forms part of stratified, was then used to pick 278 teachers from 12 schools for the analysis. The researcher used a simple random sample lottery method.

3.4. Instrument

The questionnaire was designed on the basis of the research hypotheses and the major variables of importance to the report. The researcher designed the instrument on the basis of a literature review called Teacher Perception and Preparedness on Licensing Questionnaires (TPPLQ). TPPLQ was composed of five sections. Section A dealt with teacher perceptions about teacher licensing, Section B dealt with teacher preparedness for the implementation of teacher licensing policies and Section C dealt with perceived effects of teacher licensing. The score point ranged from 1-4 as follows: Strongly Disagree-1, Disagree-2, Agree-3, and Strongly Agree-4.

4. Findings

Hypothesis One: There is no statistically significant difference of male and female teachers on teacher licensing perception levels policy in Ghana.

Teachers' knowledge standard on teacher licenses has been evaluated along the lines of class (i.e. teachers' sex). The mean scores of male and female teachers in teacher licensing were calculated on teacher perception level. The calculated mean score of male teachers ($M = 29.5$, $SD = 6.69$) seemed to be equal to mean score of female teachers ($M = 29.6$, $SD = 7.43$) on their perception level in teacher licensing. The independent samples t-test was performed at a sense point of 0.05 to assess if there was no statistical significant difference in the mean scores of both male and female teachers on their perception level in teacher licensing. The results of the independent-samples t-test are presented in Table 1.

Table-1. Results of t-test analysis on the difference in teacher perception level on teacher licensing.

Gender	N	M	SD	t	df	p
Male	193	29.5	6.69	-0.144	273	0.886
Female	82	29.6	7.43			

The results on Table 1 show that male teachers did not have different perception in teacher licensing from their female counterparts. This is because the mean score of male teachers ($M = 29.5$, $SD = 6.69$ and $N = 193$) was not statistically significantly different from the mean score of female teachers ($M = 29.6$, $SD = 7.43$ and $N = 82$ since $t(273) = -0.144$, $p = 0.886$ and $p > 0.05$ on teachers' perception level in teacher licensing. The researcher then failed to reject the null hypothesis that, there was no statistically significant difference in the perception level of male and female teachers on teacher licensing in Ghana.

The results show similar level of perception of teachers in teacher licensing. That is the knowledge of male teachers, which is similar to that of female teachers licensed to teach. Although Venkatesh et al. (2016) found that moderators such as gender predicted behavioral intent as such in teacher licensing knowledge but gender could not predict the level of teacher perception in teacher licensing in Ghana. Therefore in teacher certification there is no disparity between male and female teachers in the extent of classroom competence.

The survey findings support (Winarti, 2016) that there was no gender difference in the interpretation of the students. Therefore, it may be inferred that whatever the impact of teacher licensing might be, it should influence all male and female teachers equally, and that equal consideration will be paid to male and female teachers while teacher sensitization or education is being performed.

Hypothesis Two: There is no statistically significant difference in male and female teachers' preparedness towards teacher licensing in Ghana.

Research hypothesis two sought to find out whether there was no significant difference in male and female teachers' preparedness towards the implementation of the teacher licensing policy implementation. The independent t-test was used to evaluate the data and check for the hypothesis. This is because there was one independent variable, the preparedness of teachers, being contrasted to two different male and female variables. The results of the independent t-test are presented in Table 2.

Table-2. Results on independent t-test analysis on teachers' preparedness.

Gender	N	M	SD	t	df	p
Male	193	16.07	3.630	0.721	273	0.472
Female	82	15.72	3.736			

Table 2 shows that, for male, $M = 16.07$, $SD = 3.630$ for female, $M = 15.72$, $SD = 3.736$ and $N = 82$ on teachers' preparedness towards the teacher licensing policy. The mean scores show that the male teachers had a higher mean score their counterpart. However, results of the Independent t test were, $t(273) = 0.721$, $p = 0.472$ (two tailed). It shows that there was no statistically significant difference in teachers' preparedness of male and female teachers towards the teacher licensing implementation.

Student training is one of the principles in appraisal instrument management. The time and date for taking the examination will be made clear to the examinees. The study results showed that, due to gender, there was no statistical difference in the preparedness of teachers for the Ghana licensure exam. That is both male and female teachers were given equal information on the administration of the test. Just as the Lowery, Roberts, and Roberts (2010) findings showed that there was no substantial difference in teacher preparedness for an instructional program among K-12 teachers, so was the Ghanaian teachers' preparedness for the gender-based teacher licensing scheme. This indicates that the instruction or preparation provided to teachers before enforcing the policy was similarly influenced by both male and female teachers, so that an equitable response to licensing policy should be anticipated.

Hypothesis Three: There is no statistically significant difference in teachers' perception about teacher licensing in Ghana based on qualification

In Ghana, professional GES teachers can be classified in qualification terms. According to professional qualifications, the teachers were categorized as Certificate 'A', Diploma, Bachelor's and Postgraduate Degree holders in GES teaching various topics at the senior high schools.

Research hypothesis three sought to find out whether there is a significant difference in teachers' perceptions of the teacher licensing policy due to qualification. To test the hypothesis, the One-way ANOVA was used to analyse the data. This is because there was one dependent variable, teachers' perception, being compared among four sublevels of the independent variables, qualification. The result is presented in Table 3.

Table-3. Teachers' perception of teacher licensing based on qualification.

Qualification	N	Mean	S D
Cert A	3	35.00	4.583
Dip	9	29.89	6.735
Bachelor	215	29.31	7.009
Post-graduate	48	29.98	6.561
Total	275	29.51	6.901

The results in Table 3 show that for Certificate 'A' holders, $M = 35.0$, $SD = 4.583$ and $N = 3$, Diploma holders, $M = 29.89$, $SD = 6.735$ and $N = 9$, Bachelor degree holders, $M = 29.31$, $SD = 7.009$ and $N = 215$, and for Post-graduate holders, $M = 29.98$, $SD = 6.561$ and $N = 48$. This means that teachers who were Cert A holders had a better perception about the licensing of teachers and Bachelor holders had the least perception about the policy.

The study further examined whether there was a difference in the means of perception level on teacher licensing in relation to teacher qualification. One-way between-groups ANOVA was conducted and the results are presented in Table 4.

Table-4. Results of one-way ANOVA of teachers' perceptions based on qualification.

Source	Sum of Squares	Df	Mean Square	F	p
Between Groups	111.134	3	37.045	0.776	0.508
Within Groups	12939.608	271	47.748		
Total	13050.742	274			

From Table 4, the results shows no statistically significant difference in teachers' perception of the teacher licensing examination due to qualification, $F(3, 271) = 0.776$, $p = 0.508$. This is because $p > 0.05$. The researcher, then, failed to reject the null hypothesis that, there is no statistically significant difference in teachers' perception of the teacher licensing examination based on qualification.

The results show that teachers with a bachelor's degree (compared to holders of 'A' certificate, diploma and post-graduate degree) are their professional qualifications for teaching various topics at senior high school. Nevertheless, the teachers did not differ in their level of teacher licensing knowledge. This may be because Ghanaians do not hold the opinion that the implementation of teacher licensing policy in Ghana is a government effort to render the teaching career legal and remove the public's concerns regarding teacher competence in high school teaching. Winarti (2016) showed similar results that there were no statistically

significant differences in perceptions of TCP-total teachers as well as in each teacher subscale based on the degree of educational background. That means it doesn't matter the educational standard of the students, they share a similar understanding of the teacher licensing policy. The explanation may be that regardless of the degree of education teachers have about the same terms of employment and the same understanding of the teaching career that little regarding it has changed.

5. Conclusions and Recommendations

In teacher policy in Ghana teachers do not differ statistically in their level of knowledge. This is seen from a gender and professional qualification perspective. Although the proportion of male teachers is higher compared to female study teachers, they do not differ statistically in their level of knowledge in Ghana's teacher licensing policy. The present study added to the literature on areas where knowledge or behavior is not predicted by gender as a moderator. Additionally, teachers involved in the study qualified as professional teachers along the lines of 'A' certificate, diploma, bachelor, and graduate degrees. In their knowledge regarding teacher licensing based on professional qualification, the teachers do not differ statistically. The government should organize professional development programs through the teacher licensing authority to educate teachers to see why it is time to introduce the teacher licensing policy in Ghana.

As teachers have unanswered questions about the teacher licensing policy, it was recommended that the GES outreach unit use the mass media and professional development to help teachers answer their policy questions.

Once again, the study recommended that GES and teachers' unions use professional development programs to educate and prepare teachers for policy implementation.

Further, teachers perceive that the teacher licensing policy would be well implemented if teachers were consulted as stakeholders; it was recommended that the Ministry of Education, GES, and the licensing authority should involve the various groups of teachers' unions in formulating the policy to prevent teacher resistance.

References

- Acosta, S. A., & Acosta, C. I. (2016). Does teacher licensure matter? Basic education reform in the Philippine education system. *International Journal of Education, 8*(4), 73-91.
- Ahmad, B. I. e. (2014). User acceptance of health information technology (HIT) in developing countries: A conceptual model. *Procedia Technology, 16*, 1287-1296. Available at: <https://doi.org/10.1016/j.protcy.2014.10.145>.
- Amedahe, F. K. (2002). *Fundamentals of educational research methods*. Mimeograph, University of Cape Coast (Unpublished).
- Aquino, A., & Balilla, L. (2015). Pre-service teachers' licensure examination plans and content knowledge. *Asia Pacific Journal of Education, Arts and Sciences, 2*(2), 110-116.
- Asare, K. (2009). Education: Training, retraining, and retaining teachers in Ghana (Part 1). Retrieved from: <http://www.modernghana.com/news/211101/1/education-training-retraining-andretainingteache.html>.
- Boateng, V. (2014). *An examination of tender evaluation practices in Metropolitan, municipal and district assemblies in Ashanti region*. Doctoral Dissertation.
- Carr, D. (2013). *The effects of teacher preparation programs on novice teachers regarding classroom management, academic preparation, time management and self-efficacy*. Dissertation, Liberty University. Lynchburg: VA.
- Coggs, J. G., Rasmussen, C., Colton, A., Milton, J., & Jacques, C. (2012). *Generating teaching effectiveness: The role of job-embedded professional learning in teacher evaluation (Research & Policy Brief)*. Washington, DC: National Comprehensive Center for Teacher Quality.
- Crosswell, L. (2009). Classroom management: Developing your own approach to managing the classroom. In J. Millwater & D. Beutel (Eds.), *Stepping out into the real world of education* (pp. 41-68). New South Wales, Australia: Pearson.
- Cunningham, P. M., & Allington, R. (2003). *Classrooms that work: They can all read and write* (3rd ed.). Boston, MA: Allyn & Bacon.
- Darling-Hammond, L. (2000). Teacher quality and student achievement. *Education Policy Analysis Archives, 8*(1), 16-23. Available at: <https://doi.org/10.14507/epaa.v8n1.2000>.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science, 35*(8), 982-1003.
- Holden, R. J. (2012). Social and personal normative influences on healthcare professionals to use information technology: Towards a more robust social ergonomics. *Theoretical Issues in Ergonomics Science, 13*(5), 546-569. Available at: <https://doi.org/10.1080/1463922x.2010.549249>.
- Im, I., Hong, S., & Kang, M. S. (2011). An international comparison of technology adoption: Testing the UTAUT model. *Information & Management, 48*(1), 1-8.
- Karahanna, E., & Straub, D. W. (1999). The psychological origins of perceived usefulness and ease-of-use. *Information & Management, 35*(4), 237-250. Available at: [https://doi.org/10.1016/s0378-7206\(98\)00096-2](https://doi.org/10.1016/s0378-7206(98)00096-2).
- Kissock, C., & Richardson, P. (2010). Calling for action within the teaching profession: It is time to internationalize teacher education. *Teaching Education, 21*(1), 89-101. Available at: <https://doi.org/10.1080/10476210903467008>.
- Kowitlawakul, Y., Chan, S. W. C., Pulcini, J., & Wang, W. (2015). Factors influencing nursing students' acceptance of electronic health records for nursing education (EHRNE) software program. *Nurse Education Today, 35*(1), 189-194. Available at: <https://doi.org/10.1016/j.nedt.2014.05.010>.

- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607-610.
- Law, N., & Chow, A. (2008). Teacher characteristics, contextual factors, and how these affect the pedagogical use of ICT. In *Pedagogy and ICT use* (pp. 181-219). Dordrecht: Springer.
- Leedy, P. D., & Ormrod, J. E. (2005). *Practical research: Planning and design* (8th ed.). US, NJ: Pearson Merrill Prentice Hall.
- Lowery, D. C., Roberts, J., & Roberts, J. (2010). Alternate route and traditionally trained teachers' perceptions of teaching preparation programs. *Journal of Case Studies in Education, 3*(1), 1-11.
- Lynch, D. C., Surdyk, P. M., & Eiser, A. R. (2004). Assessing professionalism: A review of the literature. *Medical Teacher, 26*(4), 366-373. Available at: <https://doi.org/10.1080/01421590410001696434>.
- Mark, R. R., Conn, T., Gwen, W., & Bernadette, K. (2006). National implications: Teacher education students' perceptions of state licensure requirements and pedagogical training. *National Forum of Teacher Education Journal, 16*(3), 1-8.
- Quansah, F., & Ankoma-Sey, V. R. (2020). Evaluation of pre-service education programme in terms of educational assessment. *International Journal of Research in Teacher Education, 11*(1), 56-69.
- Schein, E. H. (2017). *Organization development: A Jossey-Bass reader*. New York: John Wiley & Sons.
- Susskind, R. E., & Susskind, D. (2015). *The future of the professions: How technology will transform the work of human experts*. Oxford: Oxford University Press.
- Thompson, M., C. (2010). *Beginning teachers' perceptions of preparedness: A teacher education program's transferability and impact on the secondary English/Language art classroom. Dissertation*: Georgia State University.
- Venkatesh, V., Thong, J. Y., & Xu, X. (2016). *Unified theory of acceptance and use of technology: A synthesis and the road ahead*. Leicester: Inter-varsity Press.
- Winarti, A. (2016). Teachers' perceptions of teacher certification program (TCP) In Indonesia. *Journal of Research & Method in Education, 6*(5), 73-81.