

## TEACHERS' EXPERTISE AND STUDENTS' LEARNING OUTCOMES IN SECONDARY SCHOOLS IN ENUGU STATE, NIGERIA.

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### Abstract

*The global world is increasingly becoming more competitive, placing greater demands for dynamism and effectiveness on education system – the ultimate key to national development. In Nigeria, therefore, where poor students' learning outcomes now question the effectiveness of the education system and consequently, threaten the overall national development, investigating the barriers to positive educational outcomes is of utmost importance. Given the critical role of the teacher in Education system, there is need to find out the relationship between teachers' practices and students' learning outcomes. This study sought to investigate the correlation of dimensions of teachers' expertise and student's learning outcomes in Enugu state. A sample of 1378 senior secondary school students and their teachers from secondary schools in Enugu state was used for the study. The study was guided by four null hypotheses. Three instruments (Teachers' Expertise Survey Scale-TESS; Students' Achievement Record Sheet- SARS and Students' Competency Scale-SCS) were developed, validated and used for the study. The TESS and SCS were subjected to field trial. Using the Chrombach alpha method, the reliability test yielded 0.79 and 0.88 for TESS and SCS respectively. Linear regression was used for data analysis. Results showed that all subscales of teachers' expertise (Pedagogical-content knowledge (PCK); Professional development; compliance to ethical values) positively predicted students' outcomes as measured by academic achievement ( $B = 0.61$ ,  $\beta = 0.22$ ,  $t = 4.34$ ,  $p < 0.00$ ) and different aspects of students' competencies such as motivation to learn ( $B=1.41$ ,  $\beta = 0.68$ ,  $t= 4.33$ ,  $p < 0.00$ ), self-efficacy ( $B= 1.65$ ,  $\beta = 0.44$ ,  $t =3.19$ ,  $p < 0.00$ ), social awareness/perspective taking ( $B= 0.78$ ,  $\beta = 0.35$ ,  $t= 5.26$ ,  $p < 0.01$ ) and self-management ( $B = 0.98$ ,  $\beta = 0.31$ ,  $t = 5.93$ ,  $p < 0.00$ ). It was recommended, among others, that Government should make provision for in-service teachers' professional development; Teacher training institutions should enrich their prospective teachers with research and evidence-based teaching strategies. Surveillances should be put in place in form of monitoring teachers' ethical practices so as to unearth*

*examination malpractices (which could lead to certification without qualification of their products), poor classroom management, and poor teaching strategies.*

### **Introduction**

Over the years, defining and improving students' learning outcomes has been a major focus of all the educational stakeholders across the world. This is as it should be, given the critical place of Education in the development of the individual in particular and the Nation in general. In a developing country like Nigeria, the hope for following the trend of the increasingly dynamic society, and meeting up with overwhelming developmental demands of the 21st Century lies, to a great extent, on the effectiveness of developing the "learners" as individuals. No wonder it is stated clearly in the Nigerian philosophy of education, that education is an instrument for national development (Federal Republic of Nigeria FRN, 2013). Among the goals of education as an instrument for national development, as the National Policy on Education has it, is development of appropriate skills, mental, physical and social abilities and competencies to empower the individual to live in and contribute positively to the society (FRN, 2013).

Going by what is prevalent in Nigeria today, it is not out of place to say that education is not meeting up with expectations in achieving these goals. Evidences of poor achievement, poor life and problem-solving skills and poor social skills prevalent among members of Nigerian society abound (Aina, Olanipekun, & Garuba, 2015). In the recent years, it has been found that both the teachers and their students engage social vices such as examination malpractices leading to certification of the unqualified - a situation whereby an individual cannot defend his/her excellent certificate in his or her work place and other life experiences. Many of our graduates-teachers and those in other fields - are found unemployable. There is evidence of Bribery and Corruption among students and the workforce. The possible result is overall poor economic productivity. Not only is the Education in Nigeria threatened, but the economic, social and developmental systems of both the individuals and the society are affected as well.

Effectiveness of school output is to a great extent dependent on the teacher as the primary tool for development. Yet evidences have it that teachers who are expected to mould students' character tend to mar it by their involvements in non-conforming practices and dispositions (Akindutire, & Ekundayo, 2012; Ogundele, Olanipekun, & Aina, 2014). Some of these teachers were never interested in their school work when they themselves were being trained. They still ended up half baked and have no interest in their

job and are not proud of their job. At school level, teachers ought to provide opportunities for their learners to fulfill their academic and personal potentials as embedded in students' learning outcomes; and prepare them for success in life.

Learning outcomes are measurable and verifiable knowledge, skills, abilities and/or attitudes that students are expected to have at completion of a course, program or service. A learning outcome is a clear statement of what a learner is expected to be able to do, know about and/or value at the completion of a unit of study, and how well they should be expected to achieve those outcomes. Learning outcomes are the learning goals; they are the knowledge, skills, attitudes and habits of mind that students take with them from a learning experience (Suskie, 2014). They are those statements that specify what the learner will know or be able to do as a result of a learning activity; expressed as knowledge, skills or attitude (American Association of Law libraries, 2014). Learning outcomes not only serve the purpose of directing the content and design of a unit of study, they form the basis of assessment and are also linked to the larger life outcomes.

The term learning outcomes typically refers to either (1) the desired learning objectives or standards that schools and teachers want students to achieve, or (2) the educational, societal, and life effects that result from students being educated. In the first case, learning outcomes are the intended goals of a course, program, or learning experience; while in the second case, learning outcomes are the actual results that students either achieve or fail to achieve during their education or later on in life.

Though academic learning outcomes in form of achievement is the only learning outcome variable that attract much attention from educational stakeholders, other non academic outcomes are together the business of schooling since neither one in isolation can prepare the young learners for effective adulthood and the world of work. Preparing students for life success requires a broadly balanced education that ensures both students' mastery of basic academic skills and their development of personal and social skills that would equip them to become responsible adults. Learning outcomes thus become a continuum of achievement in academic, social, and emotional dimensions. They are fundamentally intertwined and mutually reinforcing during learning process (The ASPEN Institute, 2017). Social and emotional/personal learning outcomes include the cognitive and non-cognitive or soft skills and competences that are learnable in educational experiences (Hechman & Kautz, 2012; Cappella, Blair & Aber, 2016).

In this study therefore, student learning outcomes is defined as the totality of the academic, social and emotional standard or achievements that a

learner is expected to gain during and at the end of school years. Learning outcomes encompasses all the employability skills, inter- and intra-personal skills and learning that jointly prepare an individual for productivity in both present and later life. In this study, students' outcomes are measured by students' achievement and survey of non academic skills as motivation to learn, self-efficacy, social awareness/perspective taking and self-management which are linked to long term life outcomes. In the United States, social and emotional learning have been adopted as school-wide curriculum where teacher, school administrators, counselors/psychologists participate in teaching these skills (Ceuz, Raven & Weissberg, 2016). However, though Nigeria lacks such framework, social-emotional skill could be instilled in the students together with the academic expectations through classroom practices. This is possible because learning outcomes are not just products of what is taught, but also, how materials are taught. Teacher can help students develop such skills by allowing them work on problems in groups and using other skillful pedagogical dispositions. Thus, the expertise possessed by the teacher in guiding the students through achieving these expected outcomes (academic and social-emotional) could go a long way in predicting how skilled the students would be in those areas.

Research has consistently shown that teachers have substantial impact on their students' academic and life success (Hotaman, 2010; Chetty, Friedman & Rockoff, 2011; Jackson, 2012). Teachers' expertise is a multidimensional construct which includes different aspects of teacher effectiveness such as mastery of content, (content knowledge) effective communication and classroom management (pedagogical knowledge). An expert teacher has the repertoire of content knowledge, diagnosis of task-specific requirement, pedagogical knowledge and curriculum knowledge, diagnostic competence (able to judge the students' strengths and weaknesses) and skill in giving feedback (Christophal, Grashler & Schaoz, 2014). Teachers' expertise is revealed by knowledge of the content; capabilities in managing classroom environments, and interaction with the students. In this study, teachers' expertise is defined as a multifaceted teachers' effectiveness in ensuring students' all-round development. It is conceived along three major dimensions including pedagogical-content knowledge (PCK); Professional development; and compliance to ethical values.

Pedagogical content knowledge (PCK) is an amalgam of specific content knowledge, knowledge of teaching strategies and application, prior knowledge of learners' conceptions that allow a teacher to transform specific content into more conceptually accessible version for the learners (Zibuyi, 2012). Pedagogical content knowledge also includes knowledge of the

conceptual and procedural knowledge that students bring to the learning of a topic, the misconceptions about the topic that they may have developed, and the stages of understanding that they are likely to pass through in moving from a state of having little understanding of the topic to mastery of it (Hotaman, 2010). Evidences available show that students' performance is more heavily influenced by the teacher's quality in terms of content and pedagogical knowledge rather than by students' prior academic record or school a student attends (Ishola and Udofi, 2017; Odumosu, Olisama & Fisayo, 2018).

Ethics refers to the moral values regulating the suitable behavior of individuals. Professional ethics are general regulations concerning the duties performed by members of a profession (Ishrat, 2015). Ethical values can be seen as codes of responsibilities of the profession that should be followed to strengthen public trust in that profession. Teachers need to understand the ethical and legal responsibilities associated with educational assessment to avoid undesirable consequences on the students. Poor adherence to professional ethical values by teachers could be responsible for teachers' indulgence in school malpractices. The principal researcher in this study is a Board Chairman in more than 25 public and private schools in Enugu State. One very regrettable incidence was when a Literature teacher picked up a bundle of answer scripts of students for Biology examination, graded them and returned grades to the Vice Principal (Academic). The fact implied here is that the teacher never recognized the scripts were not meant for his course because he did not read them, yet he awarded marks arbitrarily. If he read them, he should have known the answers had absolutely nothing to do with his questions in Literature. There is also a high level of teachers' absenteeism and other social evils being practised in the system by teachers in Nigerian schools and in Enugu State, specifically.

Apart from adherence to ethical values and teachers' pedagogical content knowledge, teachers' professional development is another factor that is paramount in their effectiveness and maintenance of high standard in teaching. This is because, no matter the effectiveness of pre-service training for the teachers, it cannot be expected that teachers are equipped with skills to face the dynamic challenges they could face throughout their career (Thoker, 2017). Professional development implies update of teachers' knowledge of subject in the light of new advances and trends in the area; update of the teachers' skills, attitudes and approaches in relation to development of new teaching techniques, circumstances and research; application of changes made in curriculum or other teaching practices; exchange of information and expertise among teachers and others; and helping weaker teachers become more effective. In this, there is therefore, the recognition that development can

be provided in many ways ranging from the formal to informal activities such as courses, workshops, formal qualification programmes, collaboration between schools or teachers across schools (teachers' network), coaching and mentoring, collaborative planning and teaching /sharing of good practices. It also includes informal activities such as reading professional literature (e.g journals, evidence-based papers, theses); engaging in informal dialogue with peers on how to improve teaching.

Considering the fact that the teacher facilitates all learning processes in the school setting, the expertise teachers express in different dimensions of their job could determine how well the learning outcomes are attained among the students. An expert teacher should be instrumental to effective teaching and learning. It is possible, therefore, that poor teachers' expertise is responsible for the poor learning outcomes among students and school leavers in Nigeria. Consequently, finding out what is limiting schools' effectiveness in accomplishing the goals of education could be a wise attempt to repositioning the country towards the world-wide trend of dynamic development. The problem of this study, put in question form is, what is the predictive power of teachers' expertise on students' learning outcomes?

The present study was guided by four null hypotheses which were tested at 0.05 level of significance:

- Teachers' PCK does not predict students' outcomes significantly
- Teachers' adherence to professional values is not a significant predictor of students' outcomes
- Teachers' professional development does not predict students' outcomes significantly
- Teachers' expertise has no significant predictive power on students' outcomes

## **Method**

The study adopted a correlation research design. Correlation design is considered appropriate for this study because the study sought to investigate the predictive power of teachers' expertise on students' learning outcomes. The population of the study comprised all the senior secondary school students and their teachers in Enugu state of Nigeria. A total sample of 1320 (1,178 senior secondary school students and 142 senior secondary school teachers) who were drawn through multi-stage sampling techniques, from 12 public coeducational secondary schools in Enugu state was used for the study. The researchers stratified all the secondary schools in the state into 6 Educational zones. Using simple random sampling technique, 2 schools were drawn from

each Education zone, making it a total of 12 secondary schools. Proportionate random sampling technique was also used to draw 20% of each stream in SS classes 1, 2 and 3.

In sampling the teacher, purposive sampling technique was used to draw all teachers teaching the senior secondary school classes in the sample schools. Based on this, a total of 142 teachers that met this inclusion criterion and agreed to participate in the research were gathered in the staff room to respond to the questionnaire. This lasted for about 45 minutes.

Three instruments were developed and used for the study. They are Teachers' Expertise Survey Scale-TESS; Students' Achievement Record Sheet- SARS and Students' Competence Scale-SCS. The teachers' expertise scale was meant to obtain information about the teachers' expertise. The instrument is made up of 28 items in three sub-scales of (1) - teachers' pedagogical content knowledge (PCK)-10 items; (2) - teachers' adherence to ethical values-10 items and (3) - teachers' professional development- 8 items. Items of this questionnaire were rated on a four point scale of Often, Sometimes, Rarely and Never. In scoring, Often=4, Sometimes=3, Rarely=2 and Never=1.

Students' Achievement Record Sheet- SARS is a record schedule meant to collect the achievement history of the student from the school progress register. The instrument is in table form with four columns: column 1 = serial number, 2 = first term, 3 = second term, 4 = third term and 5 = annual result of the last academic session (2017/2018 session).

Students' Competence Scale-SCS is adopted from a standardized competence scale by Panorama Education (2016). The instrument is a standardized instrument made up of five subscales including: motivation to learn (9 items), academic self-efficacy (9 items), self-esteem (6 items), social awareness/perspective taking (8 items) and self-management (10 items). The scale assessed student responses on five subscales of these individual characteristics. The scale consists of 42 items of statements structured on a five-point rating scale ranging from 1= Almost never, 2= Once in a while, 3=Sometimes; 4= Often; and 5=Almost all the time. It exhibits psychometric properties of good instruments, reliability and validity, yet the researchers re-administered the instrument to 30 senior secondary school students in Anambra State to assess the reliability of the instrument in Nigerian context. Data from the 30 students were subjected to Chronbach alpha method of reliability testing which gave overall internal consistency of 0.76. This shows that the instrument is also reliable and fit for use in Nigerian context.

With the help of three research assistants, the teachers' expertise scale was administered to the teachers while the students' competence scale was

administered to the students. Only teachers who have taught senior class in the school for at least one session were allowed to participate in the study. The researchers and the research assistants visited each of the 12 sampled schools on different days. The researchers, with the help of the research assistants, retrieved all the questionnaires administered on the spot in each school visited.

Data collected for the study were analyzed using regression analysis to test the null hypotheses at 0.05 alpha levels. The regression statistics were presented based on American Psychological Association (APA) format of presenting regression analysis, where the unstandardized beta (B) represents the slope of the line between the predictor variables and the independent variable; standardized beta ( $\beta$ ) represents the correlation coefficient; t- test statistics (t) used to calculate the p-value of the predictors; and probability level (p) tells whether or not the individual independent variable significantly predicts the dependent variable.

## Results

**Table 1: Regression table showing the relationship between the dependent and independent variables**

Model	Teachers' Expertise variables	Learning outcome variables	B	Standard error	Beta ( $\beta$ )	T	Sig.
1	PCK	Academic achievement	4.93	1.66	0.36	6.95	.000
		Motivation to learn	0.31	0.07	0.34	4.56	.000
		Self-efficacy	0.21	0.06	0.29	3.26	.001
		Social awareness	0.14	0.09	0.13	1.59	.113
		Self-management	0.22	0.07	0.23	2.93	.004
2	Compliance	Academic achievement	4.86	4.73	0.35	1.03	.000
		Motivation to learn	0.19	0.07	0.21	2.76	.006
		Self-efficacy	0.49	0.09	0.40	5.26	.000
		Social awareness	0.28	0.85	0.23	3.27	.001
		Self-management	0.32	0.92	0.30	4.55	.000
		Academic achievement	3.87	0.95	0.28	4.00	.005
3	Professional development	Motivation to learn	0.22	0.08	0.21	2.69	.008
		Self-efficacy	0.23	0.82	0.22	2.76	.006



		Social awareness	0.35	0.66	0.41	5.22	.002
		Self-management	0.64	0.07	0.61	9.17	.000
		Academic achievement	3.70	1.00	0.28	5.33	.000
4	Expertise	Motivation to learn	0.38	0.08	0.37	5.06	.000
		Self-efficacy	0.58	0.07	0.54	7.93	.000
		Social awareness	0.45	0.09	0.44	5.49	.000
		Self-management	0.39	0.07	0.38	5.26	.000

**KEY: B=Unstandardized beta; SE = standard error for the unstandardized beta;  $\beta$ = standardized beta; t= the t-test statistics and p=probability value**

Data in Table 1 model 1 show that teachers’ pedagogical content knowledge (PCK) positively predicted students’ learning outcomes. Teachers’ (PCK) had a significant predictive power on all the attributes of learning outcomes except social-awareness. Its’ predictive strengths on students’ academic achievement (B=4.93;  $\beta$ =0.36; t=6.95;  $p \leq 0.000$ ); motivation to learn (B=0.31;  $\beta$ =0.34; t=4.56;  $p \leq 0.000$ ); self-efficacy (B=0.21;  $\beta$ =0.29; t=3.26;  $p \leq 0.001$ ); social awareness (B=0.14;  $\beta$ =0.13; t=1.59;  $p \leq 0.113$ ); and Self-management (B=0.22;  $\beta$ =0.23; t=2.93;  $p \leq 0.004$ ) reveal that it is significant except in social awareness with  $p \leq 0.113$ . The unstandardized beta (B) =4.93; 0.31; 0.21; 0.14 and 0.22 for academic achievement, motivation to learn, self-efficacy, social awareness and self-management respectively imply that for every unit positive increase in teachers’ pedagogical knowledge, students’ academic achievement increases by 4.95; motivation to learn increases by 0.36; self-efficacy increases by 0.21; social awareness increases by 0.14 and self-management tends to increase by 0.22 respectively. The standardized beta ( $\beta$ ) shows a high positive correlation coefficient between teachers’ PCK and students’ academic achievement ( $\beta$ =0.36) motivation to learn ( $\beta$ =0.34); self-efficacy ( $\beta$ =0.29) self-management ( $\beta$ =0.23) and a low non significant relationship with social awareness ( $\beta$ =0.13). The strength of prediction is shown by  $p=0.00$ , showing a highly significant predictive power of teachers’ pedagogical content knowledge on the outcome variables except social awareness which had p-value  $\leq 0.113$ , showing no significant prediction. Therefore in four of the learning outcome

variables (academic achievement, self-efficacy, motivation to learn and self-management) the null hypothesis is rejected and the alternative accepted while in one outcome variable (student' social awareness) the null hypothesis is accepted. Thus, teachers' PCK significantly predicted students' academic achievement, motivation to learn, self-efficacy and self-management, but not social awareness.

Data in table 1 model 2 show that teachers' compliance/adherence to professional ethics positively predicted students' learning outcomes. Teachers' compliance/adherence to professional ethics had a significant predictive power on all the attributes of learning outcomes variables. Its' predictive strengths on students' academic achievement ( $B=4.86$ ;  $\beta=0.35$ ;  $t=1.03$ ;  $p\leq 0.000$ ); motivation to learn ( $B=0.19$ ;  $\beta=0.21$ ;  $t=2.76$ ;  $p\leq 0.000$ ); self-efficacy ( $B=0.49$ ;  $\beta=0.40$ ;  $t=5.26$ ;  $p\leq 0.001$ ); social awareness ( $B=0.28$ ;  $\beta=0.23$ ;  $t=3.27$ ;  $p\leq 0.001$ ); and Self-management ( $B=0.32$ ;  $\beta=0.30$ ;  $t=4.55$ ;  $p\leq 0.000$ ) reveal that it is significant in all the outcome variables.

The unstandardized beta ( $B$ ) =4.86; 0.19; 0.49; 0.28 and 0.32 for academic achievement, motivation to learn, self-efficacy, social awareness and self-management respectively imply that for every unit positive increase in teachers' compliance to ethical values, students' academic achievement increases by 4.86; motivation to learn increases by 0.19; self-efficacy increases by 0.49; social awareness increases by 0.28 and self-management increases by 0.32 respectively. The standardized beta ( $\beta$ ) shows a high positive correlation coefficient between teachers' compliance to ethical value and students' academic achievement ( $\beta=0.35$ ) motivation to learn ( $\beta=0.21$ ); self-efficacy ( $\beta=0.40$ ) social awareness ( $\beta=0.23$ ) and self-management ( $\beta=0.30$ ). The predictive strengths of  $p=0.00$  in each case, show significant predictive power of teachers' compliance to ethical value on the students' learning outcome variables Therefore the null hypothesis is rejected and the alternative accepted. Thus, teachers' adherence to professional ethics significantly predicted students' learning outcomes.

Data in table 1 model 3 show that teachers' professional development positively predicted students' learning outcomes. Teachers' professional development had a significant predictive power on all the students' learning outcomes variables. Its' predictive strengths on students' academic achievement ( $B=3.87$ ;  $\beta=0.28$ ;  $t=4.00$ ;  $p\leq 0.005$ ); motivation to learn ( $B=0.22$ ;  $\beta=0.21$ ;  $t=2.69$ ;  $p\leq 0.008$ ); self-efficacy ( $B=0.23$ ;  $\beta=0.22$ ;  $t=2.76$ ;  $p\leq 0.006$ ); social awareness ( $B=0.35$ ;  $\beta=0.41$ ;  $t=5.22$ ;  $p\leq 0.002$ ); and Self-management ( $B=0.64$ ;  $\beta=0.61$ ;  $t=9.17$ ;  $p\leq 0.000$ ) reveal that teachers' professional development is significant in all the outcome variables. Therefore the null hypothesis is rejected and the alternative accepted. The

unstandardized beta (B) =3.87; =0.22; 0.23; 0.35 and 0.64 for academic achievement, motivation to learn, self-efficacy, social awareness and self-management respectively imply that for every unit positive increase in teachers' professional development, students' academic achievement increases by 3.87; motivation to learn increases by 0.22; self-efficacy increases by 0.23; social awareness increases by 0.35 and Self-management tend to increases by 0.64 respectively. The standardized beta ( $\beta$ ) shows a high positive correlation coefficient between teachers' professional development and students' academic achievement ( $\beta=0.28$ ) motivation to learn ( $\beta=0.21$ ); self-efficacy ( $\beta=0.22$ ) social awareness ( $\beta=0.22$ ) and self-management ( $\beta=0.61$ ). The predictive strengths of p which is less than 0.05 in each case, show significant predictive power of teachers' professional development on the students' learning outcome variables Therefore the null hypothesis is rejected and the alternative accepted. Thus, teachers' professional development significantly predicted students' learning outcomes.

Data in table 1 model 4 show the predictive power of the overall expertise exhibited by the teachers on students' learning outcomes. Given that Teachers' PCK, adherence to professional ethics, and professional development are indices of teachers' expertise, a mean score of all the subscales were obtained and the predictive validity tested. Results show that teachers' expertise had a significant predictive power on all the students' learning outcomes variables. Its' predictive strengths on students' academic achievement (B=3.70;  $\beta=0.28$ ;  $t=5.33$ ;  $p\geq 0.000$ ); motivation to learn (B=0.38;  $\beta=0.37$ ;  $t=5.06$ ;  $p\geq 0.000$ ); self-efficacy (B=0.58;  $\beta=0.54$ ;  $t=7.93$ ;  $p\geq 0.000$ ); social awareness (B=0.45;  $\beta=0.44$ ;  $t=5.49$ ;  $p\geq 0.000$ ); and self-management (B=0.39;  $\beta=0.38$ ;  $t=5.26$ ;  $p\geq 0.000$ ) reveal that teachers' expertise significantly predicts all the students' learning outcome variables. Therefore the null hypothesis is rejected and the alternative accepted. Thus, teachers' expertise significantly predicted students' learning outcomes.

## **Discussion**

Result of the study revealed a positive relationship between the dimensions of teachers' expertise and dimensions of students' learning outcomes such as academic achievement, motivation to learn, self-efficacy and social awareness and self-management. This finding concurs with previous finding of Akindutire, & Ekundayo (2012) and that of Olanipekun, & Aina (2014) who found positive correlation between teachers' expertise and students' learning. This means that students' learning outcomes in the aspects of academic achievement, motivation to learn, self-efficacy, social awareness and self-management could be determined by teachers' expertise as expressed

in their PCK (Odumosu, Olisama, Ogunsanya, Fisayo, 2018), adherence to professional ethics (Blazer, 2016) and professional development (Telese, 2012).

It thus implies that a high level of teachers' pedagogical content knowledge tends to lead to students' improved academic achievement. This could mean that teachers who are at home with their subject area tend to express high expertise in passing the right knowledge and insight, have a repertoire of knowledge of the content and experience that would enable them identify students' misconceptions of the subject or topic. Then, if the same teacher also possesses expertise in the areas of using the right teaching strategies that are appropriate for both the content of learning, students' characteristics and the teaching learning environments; making good organizational structure that is conducive for learning; and managing contingencies in the learning milieu, students' achievements are likely to be enhanced (Blazar, 2016; Ayeni, 2017; Odumosu, Olisama, Ogunsanya, Fisayo, 2018). On the other hand, if the teachers become deficient in these areas, their students are likely to suffer – develop poor self-efficacy, lack the willingness to learn (poor motivation), develop poor social awareness and would lack the skill for self-regulation (self-management).

When the teacher works with consciousness of their professional ethics, they tend to avoid unethical practices like examination malpractices, teachers' absenteeism in school and in class, misappropriation of funds and instructional material and other kinds of bribery and corruption. Such a teacher tends to make unalloyed efforts toward ensuring that the students are not only taught what they are expected to be taught but are helped to develop their maximum potentials appropriate for their age and education level. Such movements go a long way in impacting both the students' academic achievement and their intra- and inter-personal skills necessary for their academic and personal development, such as self-efficacy, motivation to learn, social awareness and self-management. In the social area, teacher acts as a role model whom the students copy. Where the teacher is conforming or non-conforming to rules and regulations, the students naturally copy from their teacher. Consequently, adherent teacher produces adherent students; otherwise the entire system will be in chaos.

In the same vein, teachers' professional development was found to be a significant predictor of students' academic achievement, self-efficacy, motivation to learn, social awareness and self-management. This finding concurs with other studies (Aliyu, Yashe, & Adeyeye, 2013; Aina & Olanipekun, 2015) which found that professional development influences the students' outcomes. Professional development here means that the teacher

engage in life-long learning process where the teacher keeps improving his or her expertise in the teaching profession. As the teacher learns more about the content and skills through personal efforts, his or her effectiveness in teaching the students improves and consequently, students' outcomes are bound to improve.

### **Conclusion**

- Teachers, who show high expertise in PCK, produce students who are high achievers in academic pursuit; express high academic self-efficacy; are highly motivated to learn and are self-regulators. Teachers' PCK does not predict students' social awareness.
- Teachers who show high expertise in adherence to professional ethics produce students who are high achievers in academic pursuit; express high academic self-efficacy; are highly motivated to learn, take social perspectives and are self-regulators.
- Teachers who show high expertise in professional development produce students who are high achievers in academic pursuit; express high academic self-efficacy; are highly motivated to learn and are self-regulators.
- A combination of all aspects of teachers' expertise tends to predict learning outcomes in different dimensions. Thus, high expertise predicts high students' learning outcomes, and low expertise undermines students' learning outcomes.

### **Recommendations:**

Based on the above conclusions of the study, it was recommended that:

1. Attempts should be made by teachers to improve on their expertise in order to build and sustain, in their students, a strong sense of self-efficacy, high academic achievement, motivation to learn, social- and self-regulatory skills. To do this, they should be reading current books and research-based findings.
2. To do the above well enough, teachers must be encouraged to engage in professional development programs. They must be involved in periodic in-service training, workshops, and seminars.
3. Federal Ministry of Education FME (2014) already has guidelines for the implementation of National Teacher Education Policy. Yet, one doubts that the promise of incentives for all teachers has become a reality. Part of these incentives should be supporting the teachers to collaborate with other teachers in Africa and elsewhere so as to keep in touch with new innovations whilst sticking to their professional ethics.

4. Teachers need to be trained well before certificates are awarded them. Teacher-Education institutions should put their hands on deck to ensure graduation of teachers that are experts in all areas necessary for their effectiveness in their world of work.
5. There is need to have more frequent monitoring – not the once in five years stuff (Accreditation) - to make sure these guidelines are followed to the letter.

### References

- Thoker, A.A. (2017). Professional ethics of secondary school teachers in relation to their gender: A comparative study. *International Journal of Advanced Educational Research*. 2 (6) 350-355
- Agharuwhe, A. A. (2013). Effects of Teachers' Effectiveness on Students' Academic Performance in Public Secondary Schools; Delta State – Nigeria. *Journal of Educational and Social Research*, 3(3), 105-111.
- Aina J. K. & Olanipekun S. S. (2015). A Review of Teachers' Qualifications and Its Implication on Students' Academic Achievement in Nigerian Schools. *International Journal of Educational Research and Information Science*. 2, (2), 10-15.
- Aina, J.K., Olanipekun, S.S., & Garuba, I.A. (2015). Teachers' effectiveness and its influence on student learning. *Advances in Social Sciences Research Journal*, 2(4), 88-95.
- Akindutire, I.O., & Ekundayo, H.T.(2012). Teacher education in a democratic Nigeria: Challenges and the way forward. *Educational Research*, 3(5), 429-435.
- Aliyu, U.A., Yashe, A., & Adeyeye, A.C. (2013). Effect of teachers qualifications on performance in Further Mathematics among secondary school students. *Mathematical Theory and Modeling*, 3(11), 140-146.
- American Association of Law libraries (2014). *Writing learning outcomes*. [www.aallnet.org/proder/outcomes.asp](http://www.aallnet.org/proder/outcomes.asp).
- Association for supervision and curriculum development (2007). *The learning compact redefined: A call to action- A report of the commission on the whole-child*. Alexandria, VA: Author.
- Ayeni, A. J. (2017). Teachers' classroom management and quality assurance of students' learning outcome in secondary schools in Ondo State, Nigeria. *Journal of Social and Administrative Science*. 4(2). 160-180
- Baumert J. & Kunter, M. (2013). *The Effect of Content Knowledge and Pedagogical Content Knowledge on Instructional Quality and Student*

- Achievement*. DOI: 10.1007/978-1-4614-5149-5\_9.  
<https://www.researchgate.net/publication/278658743>
- Bietebeck, J. C. (2014). *Teaching Practices and Student Achievement: Evidence from TIMSS*. <http://www.semanticscholar.org>
- Blazar, David. 2016. *Teacher and Teaching Effects on Students' Academic Performance, Attitudes, and Behaviors*. Doctoral dissertation, Harvard Graduate School of Education.
- Chetty, R., J. Friedman, & Rockoff, J. (2011). "The Long-Term Impacts of Teachers: Teacher Value-Added and Student Outcomes in Adulthood," *NBER Working Paper* No. 17699.
- Ceuz, P. Raven, S. & Weissberg, R, (2016). Social-Emotional Learning: Systematic innovation for improved outcomes. [www.edweek.org/go/webinars](http://www.edweek.org/go/webinars)
- Cosmas MB, Maciline D. (2015). Interrogating the Significance of Professionalism and Professional Ethics in the Teaching Profession. *Journal of Social Anthropology*. 6(2):263-272.
- Federal Ministry of Education (2014). Implementation Guidelines for the National Teacher Education Policy (NTEP). Abuja, Nigeria.
- Federal Republic of Nigeria (2004). Teachers Registration Council of Nigeria. *Teachers Code of Conduct*. TRC. HQ. Abuja, Nigeria.
- FRN, (2013). National Policy on Education. 6<sup>th</sup> Edition. NERDC Press Yaba, Lagos.
- Hotaman, D. (2010). The Teaching Profession: Knowledge of Subject Matter , Teaching Skills and Personality Traits. *Procedia Social and Behavioural Sciences* 2, 1416-1420. [www.sciencedirect.com](http://www.sciencedirect.com)
- Ishola, A. A. and Udofia I. G. R. (2017). Effect of Demographic Factors and Teachers' Mastery of Instructional Designs as Predictors of Pupils achievement in Mathematics. *Journal of Educational Research and Development*. 15(1) 10-24
- Ishrat, N. (2015). A Study of Perception of Professional Ethics of Student Teachers (Unpublished Ph. D. Thesis), Jamia Millia Islamia. India..
- Odumosu, M. O, Olisama, O.V Ogunsanya, A. Fisama, A. (2018). Teachers' content and pedagogical knowledge on students' achievement in algebra. *International Journal of Education and Research* 6 (3) 2411-5681 [www.ijern.com](http://www.ijern.com)
- Ogundele, G.A., Olanipekun, S.S., & Aina, J.K. (2014). Causes of poor academic performance in West African School Certificate Examination (WASCE) in Nigeria. *Scholar Journal of Arts, Humanities and Social Sciences*, 2(5B), 670-676

- Olanipekun, S.S. & Aina, J.K. (2014). Improving students' academic performance in Nigerian schools: the role of teachers. *International Journal of Research in Humanities and Social Sciences*, 1(2), 1-6.
- Suskie (2014). <http://www.cc.edu/site/about/assessment.evaluate>.
- Telese, J. (2012). Middle school mathematics teachers' professional development and student achievement. *The Journal of Educational Research*, 105, 102-111.
- The ASPEN Institute (2018). How learning happens: Supporting students' social, emotional and academic development. *National Commission on Social Emotional and Academic development*. [www.aspensead.org](http://www.aspensead.org).
- Yusof, Y.M. & Zakaria, E. (2010). Investigating secondary mathematics teachers' pedagogical content knowledge: A case study. *Journal of Education and Sociology*, 32-39.
- Zibuyi, C.D. (2012). *Effect of teachers' pedagogical content knowledge in teaching quadratic functions in mathematics*. Published M.Ed Thesis, Department of Mathematics, Science and Technology Education, University of Pretoria.