

# Agriculture Teachers' Competence on Skill Acquisition among Students with Auditory Processing Disorder

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## Abstract

The inclusion of students with learning disability in regular classroom settings has been identified worldwide as essential to the provision of effective education for all and the creation of a more accessible environment. There have been few empirical studies in developing countries on teachers' competence to educate students with specific learning disabilities in an accessible environment. This study aimed to explore the influence of agricultural science teachers' competence on skill acquisition among students with auditory processing disorder. Different types of teachers' competence were examined, including methodological competence, motivational competence, material utilization competence, and teaching evaluation competence. The study employed a cross-sectional survey design with a multi-stage cluster sampling technique. A survey instrument was developed and distributed to 237 agriculture teachers in Nigeria that were asked about their perception on teachers' competence in inclusive education in providing agricultural skills and support for students with auditory processing disorder. Therefore, the agriculture teachers were asked to complete the questionnaires given one week. Data revealed that the agriculture teachers reported moderate level of teachers' competence for teaching students with auditory disorder in inclusive school settings. Implications of these results include the need for further investigation into the training needs of agriculture teachers regarding competencies for inclusive education practices, such as differentiation and universal design for learning to promote social justice.

**Keywords:** Inclusive Education, Learning Disability, Technical and Vocational Education and Training, Cooperative Vocational Education.

## Introduction

Educating students with learning disabilities in a general school setting is increasingly becoming a worldwide trend commonly known as inclusive education. Inclusive education is about the distribution of social justice and equal opportunities in education, as a prerequisite for the development of a fair society (Oliver, & Barnes, 2010). Despite the fact that the willingness of teachers to implement inclusive education is considered in psychological and educational research as a key success factor in the formation of an inclusive process, now in science education there is no single approach to the definition of the above concepts.

Relevance of a comprehensive study of teachers' competence to work in inclusive education is determined by the requirements of social development and the importance of the teacher's role in the inclusion of children with learning disabilities in the development of educational activities (Sahrma, Loreman & Macanawi, 2016).

Teachers need strong and efficient professional competencies because they are responsible for operating educational system. However, it is necessary to understand the pedagogical competencies of teacher as continuing process which is permanently submitted to valuation through the interaction with co-workers, student, parents and others (Korthagen, 2013). Therefore, there is a need to ensure that the skills, knowledge, and attitudes of teachers align with technological changes, current job requirements, processes, and so on in order to teach the different categories of students in inclusive school settings (Basu1999; Chappell, 2000). According to Guthrie (2010) a teacher is someone who has been trained and is very competent in the field and in the delivery and evaluation of teaching. In addition, has the ability to demonstrate skills; and continuously develops and progresses their career by gaining more knowledge and skills in the field.

Studies from around the globe indicated that a teacher must have social competency (Monnier, 2015); knowledge and competency in work processes (Boreham, 2002); professional and pedagogical competency (Mirzgitova & Akhmetov, 2015; Barbazette, 2006; teaching, social, management, technological and technical skills (Abdullah, Aryanti, Setiawan & Alias, 2017); leadership and personality competency in classroom organization and student management (Aliakbari & Drabi, 2013). Teacher education has been challenged by the need to enhance the new teachers' ability to implement new pedagogical approaches for teaching and learning (Jaaskela, Hakkinen & Rsku-Puttonen, 2017). According to Paryono (2015), human capital development especially teachers in the field of technical and vocational education and training (TVET) are a critical factor to generate and maintain economic growth specifically in the formation of skilled workers. The availability of highly skilled work force is important in supporting the transformation of the entire economic sector towards activities that are intensified with knowledge, generate labor productivity and attract investments. Thus, most governments of the developing countries like Nigeria and Malaysia has invested a large amount of money in the TVET sector. This investment in the field of TVET plays a major role in improving the social mobility and wellness of the citizens.

TVET is perceived as the aspect of education that is concerned with the preparation of skilled manpower. It is a form of education, training or retraining which is directed towards developing the learner to become productive in a paid employment or self-employment (Ogbuanya & Okoli, 2015). However, the main thrust of TVET is development of skills that is practical in nature. The acquisition of relevant skills of constructing, designing and repairing can only be acquired in a well functional workshop-stocked with relevant equipment and facilities. This ensures quality, dependable and sustainable employable skills to the learners. TVET is interlaced with skill acquisition and hence sustainable employability. Exposition to skill training raises hope for useful livelihood. This according to Saari and Rashid, (2013), can be achieved through the cooperative vocational education (CVE). Saari and Rashid (2013) further stated that, the relationship between the public TVET institutions with the industrial employers has given birth to the implementation of the CVE. This approach has made effective by the Department of Skills Development under the Ministry of Human Resources through the National Dual Training System (NDTS) in Malaysia since 2005.

Gemici and Rojewski (2010) stated that CVE is important in education system and curriculum development in view of the fact that apprentice or student have been expose to real work situation, working culture and hands on experience. An example of CVE is dual training system and school to work program. The CVE program refers to the cooperation between the training institutions or school and the work place for apprentices or students to gain knowledge and skills. About 70 percent to 80 percent of learning instruction and experience occurs in work place and the balance of 20 percent to 30 percent occurs at the training institution (Saari & Rashid, 2013). The purpose of CVE is to expand occupational training opportunities for both students with learning disabilities and their normal peers by utilizing the existing sites and facilities other than those of the traditional classroom.

Individuals with learning disabilities have encountered so many challenges in seeking employment following exit from school (ILO, 2010). For students whose plans have not included secondary school, making a successful adjustment from post-primary school to the university situations has been a dilemma. Quite a number of jobless individuals with disabilities have often lived within the extremes of poverty and dependence (ILO2010). Often, however, the students are unaware of the problems and sufferings that are ahead after graduation from schools. Wilson, Deri, Armstrong, Furrie, and Walcot (2009) reported that, the number of people with learning disability (LD) is ever-growing in both developed and developing countries of the world. In United States of America for example, students with LD constituted half of all students with disabilities served under the Individuals with Disabilities Education Act (IDEA) in public schools (U.S. & Department of Education, 2003). Wan Abdullah (2013), reported that, in 2007, Malaysia, as one of the developing countries also possesses a growing population of persons with learning difficulties. The most common type of LDs are those that impact the areas of reading, math and written expression. They may co-occur with other disorders of attention, language and behavior, but are dissimilar in how they impact learning (Cortiella & Horowitz, 2014).

Auditory Processing Disorder (APD) is one of such specific LDs that is characterized by an observed deficiency in the neural processing of non-speech and speech sounds by the central nervous auditory system (Tharpe & Seewald, 2016). Although APD is a widely recognized impairment, its occurrence and demographic characteristics are not precisely known in the pediatric population (Nagao, Kyoko Nagao; Riegner, Tammy; Padilla, Jennifer; Greenwood, Ashleigh; Loson, Jessica; Zavala, Sarah; Morlet, Thierry; 2016). There is no international agreement on prevalence of APD, mainly due to a lack of large scale studies measuring the rate of occurrence. There are also differences in the test batteries used and therefore how fail or pass criteria are applied (Esplin & Wright, 2014). APD is a sensory processing deficit that commonly impacts listening, spoken language comprehension and learning. APD makes it hard for students to comprehend what they hear. Although APD is a clinical diagnosis, there are no standardized medical criteria to define it. However, it is the duty of the ministry of education to consider clinical diagnoses such as APD. When making special education eligibility determinations, the ministry of education must follow the eligibility criteria that has been set up by the government. Generally, most students who has the problems of APDs or a clinical diagnosis of APD display severe academic and/or language deficits.

Students with APD can have challenges in the classroom, especially with language, oral communication, and reading. These challenges according to DeBonis (2015), often have a

negative impact both academically and socially. It is important research be conducted to find ways to minimize these negative impacts. Compared to the more commonly known exceptionalities seen in classrooms, such as learning disabilities and autism spectrum disorder, there is very little research and literature directed at teachers competence to help them support children with APD in inclusive education, the purpose of this study was to examine the level of agriculture teachers' competence in implementing inclusive education on skill acquisition of students with APD in agricultural science subject.

The teacher is expected to create conducive inclusive classrooms where curriculum is delivered to students through various means and mediums depending on the students' needs (Specht, McGhie-Richmond, Loreman, Mirenda, Bennett, Gallagher & Lyons, 2016). It is imperative then that teachers have competence, knowledge and resources about strategies they can implement to meet the greatest number of needs with the least amount of restrictions. In order to know which strategies to implement, teachers must know and understand the needs of their students, be aware of what strategies are available to them, and know how effective those strategies are. By providing information to teachers that is specifically designed to help them decide effective strategies to implement, efficient and effective teaching and learning can happen. An in-depth examination of the levels of agriculture teachers' competence in implementing inclusive education on skill acquisition among students with APD is clearly needed. In particular, given the lack of research into the agriculture teachers' competence regarding inclusive education, the aim of this study was to examine the influence of agriculture teachers' competence in implementing inclusive education among students with APD in agricultural science subject. This aim underpinned the following specific research questions:

1. What is the level of teachers' competence in implementing inclusive education on students with APD?
2. What is the level of skills acquisition among students with APD in agricultural science subject?

## **Method**

### ***Design***

This study used a cross-sectional survey design to determine the agricultural science teachers' perceptions about skill acquisition among students with APD in agricultural science subject. Creswell and Creswell (2017) described survey designs as procedures used in questionnaire to describe the attitudes, practices, opinions, perceptions, behaviors, or characteristics of the population.

### **Participants and Sampling**

The population for the study comprised of all agricultural science teachers in various secondary schools across Adamawa state of Nigeria. The state is divided into five Education Zones namely: Mubi zone, Gombi zone, Yola zone, Ganye zone and Numan zone with (Adamawa State Post primary Schools Management Board, 2015). This study used multi-stage cluster sampling technique to select agricultural science teachers from various educational zones across Adamawa State of Nigeria. According to Creswell and Creswell, (2017) cluster sampling is suitable when the population is concentrated in their natural clusters. This criterion suits the present study, because the agricultural science teachers in the study area were already within clusters', which were groups based on their respective education zones.

The participants selected for sampling were based on education zones they belong and cluster sampling ensured equal opportunity of the participants being selected.

### **Instrumentation**

The instrument for data collection was questionnaire titled "Questionnaire for Agriculture Teachers' Perception on Skill Acquisition among Students with APD" (ATPISASWAPD) in Adamawa State, Nigeria. It was designed by the researcher after thorough review of the related literature. The questionnaire is divided into three sections (A to C). Section 'A' relates to the demographic information of the respondents. Sections "B" comprised 30 items each based on teachers' competence and section "C" comprised of 15 items on skill acquisition. Each item is rated using a 5point scale from 1 (strongly disagree) to 5 (strongly agree). Minor adaptations to item wording were made to ensure the vocabularies reflected the context of skills acquisition and learning disability. The instruments was given to 2 experts from Univesiti Putra Malaysia for validation. All their observations were considered and harmonized before pilot study was conducted to ascertain the reliability. To measure the reliability based on the internal consistency of the instrument, Cronbach's alpha was calculated first from a pilot test on a sample of 35 respondents. Following that, the reliability for the actual data based on the proposed 310 respondents was gain computed at the end of the field data collection. A reliability coefficient of Cronbach's alpha 0.80 was obtained, indicating that the instrument is considered satisfactorily reliable.

Data for the study was collected by the researcher through direct administration of the questionnaire on the sampled population of agricultural science teachers with the assistance of vice principal academic and research assistants that were recruited for this purpose. An interval of three days was given to the respondents to complete the instrument after which the researcher went round to retrieve the completed copies. In the case where the respondents did not complete the instrument within the stipulated days, the researcher asks research assistant retrieve the copies and have them send to the researcher with dispatch by courier. For research question 1, we employed descriptive statistics to describe the demographic information of the participants investigated in the study. For research question 2, descriptive statistics known as mean and standard deviations were used to provide baseline data about teachers' competence on skills acquisition among students with learning disabilities of the study.

### **Results**

#### **What is the level of teachers' competence in implementing inclusive education on students with APD?**

From table 1, it can be seen that, the perception of the agricultural science teachers on the levels of teachers' competence on implementing inclusive education among students with APD, was at a moderate level is having an overall mean of ( $M = 3.49$ ,  $SD = 1.29$ ). This means that the agricultural science teachers in Adamawa State, Nigeria have exhibited moderate competencies that include: methodological competence, evaluation, instructional process, personnel management, material utilization and motivational competence require for effective teaching. This indicates that agricultural science teachers are very much concern on importance of skill acquisition among students with APD in agricultural science subject. Therefore, there is the need for the agricultural science teachers to put more effort towards developing their competencies to a level in accordance with educational transformation in

practice as well as professional activities effectively (Prasertcharoensuk, Somprach & Ngang, 2015). This is because one of the key factor in the success of any education programme and as well as inclusive education is the teachers' competence to work with children with disabilities formation.

Table 1

*Mean and Standard Deviation for Items Related to Teachers' Competence*

| Construct/Item  | Mean        | SD          |
|---|-------------|-------------|
| <b>Methodological Competencies</b>  |             |             |
| Used individual method to teach certain skills to backward students.                        | 3.39        | 1.34        |
| Assist my students in identifying mistakes during practical lesson.                         | 3.41        | 1.22        |
| Demonstrate ability to conduct lesson using varieties of methods.                           | 3.57        | 1.25        |
| Have the educational background to teach students with APD.                                 | 3.66        | 1.24        |
| Don't need more training to teach in inclusive schools.                                     | 3.45        | 1.34        |
| Demonstrate skills related to the use of materials needed for practical lessons.            | 3.44        | 1.29        |
| <b>Average Mean Score</b>   | <b>3.48</b> | <b>1.28</b> |
| <b>Motivational Competencies</b>  | 3.38        | 1.21        |
| Make use of reward to motivate my students.   | 3.36        | 1.19        |
| Create conducive environment to motivate my students to work harder.                        | 3.45        | 1.27        |
| Usually select appropriate teaching materials to teach practical lessons.                   | 3.53        | 1.41        |
| Operate projected tools to motivate students to learn.                                      | 3.46        | 1.25        |
| Apply the use of contemporary knowledge, ideas etc, to teach.                               | 3.29        | 1.22        |
| Make use of praising words to encourage my students to do better.                           | 3.36        | 1.26        |
| <b>Average Mean Score</b>   | <b>3.97</b> | <b>1.46</b> |
| <b>Material Utilization Competencies</b>  |             |             |
| Make use of readily available instructional materials to enhance teaching/learning.         | 3.36        | 1.26        |
| Attended formal training where issues about instructional resources are taught.             | 3.46        | 1.37        |
| Construct various evaluation instruments for inclusive education classroom setting.         | 3.17        | 1.43        |
| Employ various evaluation instruments correctly for inclusive education students.           | 3.10        | 1.33        |
| Use evaluation data to improve my job situation in inclusive education                      | 3.04        | 1.33        |
| Keep records of students' performance/progress in inclusive education                       | 2.97        | 1.38        |
| <b>Average Mean Score</b>   | <b>3.23</b> | <b>1.14</b> |
| <b>Instructional Process Competencies</b>   |             |             |
| Interact with my students respectfully in inclusive education class.                        | 3.19        | 1.44        |
| Use appropriate questioning skills to teach in inclusive education class                    | 3.35        | 1.30        |
| Develop course curricula properly to teach in inclusive education.                          | 2.96        | 1.36        |
| Ensure effective time management to teach my students.                                      | 3.31        | 1.27        |
| Use appropriate language techniques to interact with my students.                           | 3.54        | 1.28        |
| Show sufficient mastery of subject matter to teach students in inclusive education setting. | 3.29        | 1.29        |



|  |             |             |
|--|-------------|-------------|
| <b>Average Mean Score</b>  | <b>3.44</b> | <b>1.32</b> |
| <b>Teaching Evaluation Competencies</b>  |             |             |
| Construct various evaluation instruments for students in inclusive education           | 3.30        | 1.34        |
| Employ various evaluation techniques to teach students in inclusive education setting. | 3.48        | 1.22        |
| Assess the behaviors of students in inclusive education class.                         | 3.21        | 1.22        |
| Keep records of individual students in inclusive education class.                      | 3.33        | 1.24        |
| Set formative evaluation during lesson presentations in inclusive education class.     | 3.42        | 1.28        |
| Tried to be fair in testing, marking, grading, as well as in examination.              | 3.19        | 1.30        |
| <b>Average Mean Score</b>  | <b>3.32</b> | <b>1.27</b> |
| <b>Overall mean of teachers' competence</b>  | <b>3.39</b> | <b>1.29</b> |

### What is the level of skills acquisition among students with APD in agricultural science subject?

The descriptive results in Table 2 showed that the perception of the respondents on the level of skill acquisition is having an overall mean of ( $M = 3.35$ ,  $SD = 1.28$ ), which means that the frequency at which the agricultural science teachers' perception on the level of teacher competence on skill acquisition among students with APD in agricultural science subject is at a moderate level. This finding means that the level of agriculture teachers' competence on skill acquisition for students with APD is significantly moderate, meaning that the skills are not sufficient enough to make them functional, relevant and self-reliant. In order words the skills acquired by the students with APD cannot guarantee employment both formally and informally. As students with APD when they graduate, they will join the group of employed in the society thereby reducing the rate of dependency on families and other members of the society they belong.

This study is in conformity with that of Omar, Bakar, and Mat Rashid (2012) who discovered that employability skill acquisition in Malaysian was moderately high. The finding is not surprising because the issue of equipping students with LD with employability skills has not created an impact on employment. This might be explained that the educational sector mired in problems such as poor funding, poor learning environment, poor staff motivation and poor physical facilities. All these combined together to prevent the secondary schools from realizing their goals and objectives.

Table 2

*Mean and Standard Deviation for Items Related to Skill Acquisition*

| Item   | Mean        | SD          |
|--|-------------|-------------|
| APD students learned vegetative propagation through reading with pictures as well as doing demonstration.        | 3.30        | 1.34        |
| APD students learned planting operation through field demonstration.   | 3.48        | 1.22        |
| APD students learned check basin irrigation through group method.  | 3.21        | 1.22        |
| Students with APD acquire ploughing skills through field demonstration.  | 3.33        | 1.24        |
| Students with APD learned castration through individual method.  | 3.42        | 1.28        |
| Students having APD learned artificial insemination through laboratory method.                                   | 3.19        | 1.30        |
| APD students having problem with basic understanding of quantity learned feeds formulation through group method. | 3.39        | 1.26        |
| APD students having difficulties with processing information learned dehorning/debecking through demonstration.  | 3.22        | 1.26        |
| APD students learned chemical application through field demonstration.   | 3.40        | 1.26        |
| APD students learned farm tools use skills through consistent routine.   | 3.38        | 1.40        |
| Students with APD learned crop production skills through pictures/drawing of activities                          | 3.51        | 1.44        |
| Students with APD learned crop production skills through maintain eye contact when giving the instruction.       | 3.43        | 1.28        |
| Students with APD learned animal husbandry skills by showing them what to do more than once.                     | 3.27        | 1.21        |
| Students with APD learned equipment operation skills by giving them information in small chunks.                 | 3.36        | 1.24        |
| Students with APD learned safety skills during practical lessons through demonstration.                          | 3.48        | 1.37        |
| <b>Overall Mean of Skill Acquisition</b>   | <b>3.35</b> | <b>1.28</b> |

**Discussion**

There are two major findings extracted by this study. First, the level of agriculture teachers' competence in implementing inclusive education on skills acquisition among students with APD was found to be moderate. In this study, four types of teachers' competence were examined, including motivational competence, evaluation competence, methodological competence, and material utilization competence. Motivation of learners is one of the most significant strategies in teaching and learning process. We need to create sense of what learners need to know more often in inclusive education schools. Motivation is the first step towards successful learning. Researchers recognized the elements of teaching that improve the self-motivation of learners. To inspire students to become independent, self-motivated learners, teachers and training staff are able to provide regular early, positive feedback to reinforce students' confidence that they are able to achieve their goals well. They also provide incentives for student success by assigning assignments that are either too simple or too challenging.

Evaluation skills is essential in preparing teachers to be skilled in teaching inclusive education. Its mean agriculture teachers must be capable of developing alternative assessments, evaluating student progress, evaluating the level of functioning of each student, assessing student's individual needs, solving problems, valuing all sorts of prior student skills, and



determining the role of parents and community. The agriculture teachers are required to exhibit evaluation skills to identify students' specific needs. Evaluation is one of the most important abilities in the application of inclusive education programs for a regular school teacher (Epstein, 2018). The agriculture teacher must employ both fundamental abilities such as collecting, learning and background data from learners with different abilities as well as extremely specialized abilities such as selecting, administering, scoring and interpreting standardized measuring tools. Teachers must be able to develop an evaluation record and use cognitive strategies to enhance learning (Srinivasan, Li, Meyers, Pratt, Collins, Braddock, & Hilty, 2011). Moreover, teachers need to create the abilities needed to work efficiently with parents and other experts, such as psychologists, therapists, social workers and specialist educators, to enforce efficient inclusive special education (Hornby, 2015).

Also essential for effective inclusive education practice were skills in teaching methods. The abilities needed in teaching strategies were the capacity to change student tasks, designing classroom operations for all learners, efficiently using a range of teaching methods, adapting equipment in classes, adapting curriculum material to suit student requirements in the classroom, and providing the best learning strategy. It is clear that teachers need to understand how to enhance teaching and learning, or innovate in teaching, and they need to be exposed to different teaching methods (Florian, 2012). Adapting teaching approaches such as cooperative learning and peer tutoring can promote learning processes for students (Garrote, Sermier, & Moser, 2017). The ability to provide the finest teaching techniques with inclusive values similarly supports the way educators cope with complicated characteristics in the 21st century education framework (Di Gennaro et al., 2014). When choosing educational duties for learners to do separately in their seats, the teacher must be confident that each student has the capacity to do the job given to him or her without the need for continued attention and support from the colleagues (Ajithkumar, 2016).

Using educational equipment in the teaching and learning process provides the learner the chance to touch, smell or taste items. Knowledge and skills can be transferred to learners with various kinds of appropriate teaching materials. Using educational equipment becomes very important in enhancing the general quality of student-level learning experiences. Students were asked to state to what extent their educators used teaching and learning materials other than textbooks in teaching and learning TVET subjects. Although educators use various teaching equipment to motivate learning through the use of textbooks, charts, models, graphics, actual items and improvised materials (Elliot, Dweck & Yeager, 2017). The success of achieving what they are accomplished to achieve in an educational situation depends on the suitability of the instructional materials, adequacy and effective material utilization (Ajoke, 2017). The efficacy of teaching equipment in supporting the academic achievement of learners in teaching and learning is unquestionable. It offers the sensory experiences that the learners need for an efficient and meaningful change of behaviour.

For efficient academic performance of learners in classrooms, instructional materials are intended to enhance the quality of education. Students' performance on the expected learning results provides validation-loop on interaction and instruction achievement. Ajoke (2017) argues that teaching materials are essential in teaching and learning because they are used to complement a teacher's efficiency and the effectiveness of teaching. Moghavvemi, Sulaiman, Jaafar and Kasem (2018) stated that educational materials promote the teaching of abstract concepts by helping to put thoughts into practice and boost the imagination of learners.

Findings of this study is in line with two other studies regarding teacher competencies for inclusive education in Ghana. The most recent one was by Kuyini, Yeboah, Das, Alhassan and Mangope (2016) and the earlier one was by Kuyini and Desai, (2008). Kuyini-Alhassan and Abosi (2014) found that teachers in Ghana had 'limited to moderate' competence in adaptive instruction. While teachers reported having moderate competence in pacing lesson for pupils with learning disabilities (LD) in regular education classrooms, they reported limited competence in providing immediate and explicit feedback during lessons adjusting learning task for pupils with LDs, willingness to give enough time for pupils with LDs to complete task, providing relevant examples during lessons, creating opportunities for pupils to demonstrate their ability, using positive reinforcement effectively during lessons and gaining and maintaining children's attention during lessons. The researchers concluded that 'Teachers' lack of competence in those items may imply that majority of pupils' LDs are not addressed in the regular classroom.

Second, the level of skills acquisition among students with APD in inclusive education in this study was found to be moderate. This study is in conformity with that of Ab Rahim, Bakar and Hanaf (2007) assessed the acquisition of employability skills by vocational students in Malaysia and found out that, the employability skills of vocational secondary school students are moderately high. Another study by Omar, Bakar and Mat Rashid (2012) using community college students also confirmed the employability skills at moderate level. The finding is not surprising because the issue of equipping these students with employability skills has not created an impact on employment. This might be explained that the educational sector mired in problems such as poor funding, poor learning environment, poor staff motivation and poor physical facilities. The study found among other thing that skills acquisition in carving to students for self-employment. Rashid, Bakar, Asimiran and Tieng (2009) stated students need to be taught how to develop self-reliance and focus on work activities that are important to them so can provide fulfillment and satisfaction to enable them seek ways to qualify for self-employment opportunities in the future.

## Conclusion

The study has indeed revealed the needs for agricultural science teachers' competence in implementing inclusive education on skill acquisition for students with APD as perceived by agriculture teachers. These are rooted in the agriculture teachers' perceptions, in methodological competencies, motivational competencies, material utilization competencies, instructional process competencies and teaching evaluation competencies teachers utilize to improve in teaching students with APD inclusive classroom. On the basis of the findings, it was concluded that the level of agriculture teachers' competence in implementing inclusive education on skill acquisition for students with APD is significantly moderate. In essence more competence are needed by the agriculture teachers to enable them effectively teach various agricultural skills to students with APD in inclusive settings to create job opportunities for themselves and others.

In developing countries like Nigeria where there is high rate of unemployment among people living with disabilities, there is need for an educational curriculum to emphasize on practical training to equip them with the necessary skills that will help them to be self-employed after graduation, as skilled person can survive in any situation, be useful to himself, his family and contribute to the development of the society. Although the results of this study revealed a moderate level of teacher competence, it describes teachers' competence on skills acquisition

for students with auditory processing disorder in agricultural science subject. This would serve as a baseline study to explore factors that can increase the level of teacher competence in inclusive education. The study is therefore a wakeup call for stakeholders to organize an in-service training for agricultural science teachers in critical areas including methodology, material utilization and teaching evaluation to develop their competence in practical activities especially toward disability students. This research has also succeeded in developing and utilizing Questionnaire for Agriculture Teachers' competence on Skill Acquisition for Students with APD in the context of inclusive education. Therefore, this study is a unique in TVET educational settings to set a new track for upcoming researches in relation to the contributions of agriculture teachers' competence towards the realization of skills acquisition among students with APD.

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