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# Achieving Assessment Results: Distance Education Students of University of Education, Winneba Use of Test Taking-Skills to Solve In-Built Activities in Counselling From Self-Instructional Course Manual

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# Abstract

Adopting appropriate test-taking skills is crucial to test performance. The study assesses the use of test-taking skills among distance education (DE) students of University of Education, Winneba (UEW) in solving in-built activities on counselling in self-instructional course manual. Adopting the ex-post facto design and quantitative approach, the study used 18 participants selected through convenience sampling technique. Two instruments-test-taking questionnaires to measure the test-taking skills of participants and in-built activities in DE modules-were used to measure students' academic performance. From the analysis, DE students all adopted test-taking skills, and it was established that there was a significant relationship between students test-taking skills and their academic performance. It is concluded that test-taking skills were necessary to be used to solve in-built activities on counseling. It is recommended that the model writers need to suggest some test-taking skills which need to be used for solving in-built activities in the DE modules, especially in counseling.

**Keywords:** Test-Taking Skills, In-Built Activities, Distance Education Students, Counselling, Self-Instructional Modules, Distance Education Modules

# Introduction

When good academic performance is not attained, the individual and other family members experience feelings of anxiety concerning the individual's academic world. It is expedient to state here that the need to improve academic performance is one of the basic objectives of educating students. In every school setting, academic performance is what each student strives to achieve, and the attainment of good performance can only be enhanced through good study habits that include test-taking behaviors. Several studies (Akinboye, 1980; Adetola 1988; Pinda, 2000) have established that students' academic performance is highly influenced by their study habits/test-taking skills.

Test-taking skills among students in school in relation to their assessment have been continually researched into. Test-taking skills depend on the type of test to take. Owusu-Mensah, Torto, and Amoah (2019) argue that within

the distance education environment, different strategies are adopted by different students in attempting the inbuilt activities in their course models. Further, it is believed that activities support DE students to learn effectively, even though some of the activities are very challenging.

Exploring test-taking skills is important because, its popularity increased a hundred fold as more advanced technology and communication mediums became available in the late twentieth century. Today, enrollment in distance education programs at every educational level is commonplace, and varied assessment models have been developed over the years to support DE students. Hence, different test-taking skills have evolved.

Studies have expanded the scope of research on test-taking skills in many subject areas in relation to how these influence the performances of learners. Research has established that students' academic performance is the product of an interplay of factors like good and effective study habits and good test-taking skills, good teachers, and congenial school and home environment (Onocha & Okpala, 1985; Soyibo, 1986; Odebumni, 1988; Ajayi, 1988; Owusu et al., 2019). For example, Owusu-Mensah (2006) in a study to find out how DE students were assessed, found out that in assessment and for that matter examinations, DE students adopted varied test-taking strategies and there was a correlation between the strategies they adopted and their learning outcomes.

Within the UEW DE programme, weekends activities are structured in such a way that lecturers from the University of Education, Winneba, visit the students on venues situated outside the university's compound. Apart from the counseling course, all the other courses are taught by the university lecturers. The practicum part of the counseling course is handled by lecturers, however, different lecturers are identified in the sister universities where the programme is held to support with tutorials. The counseling course module has 25 in-built activities, and because the lecturer facilitating the programme is not one of the lecturers in the University of Education Winneba, rather outside the university, the study focused on their test-taking skills towards the solving of the inbuilt activities especially those focusing on developing counseling skills in counseling sessions.

#### Statement of the Problem

It is believed that when students in the school setting study hard, their grades improve. In promoting academic performance with the DE students, Lockwood (1992) believes that activities in self-instructional modules are meant to enhance their learning as well as supporting them understand what they are supposed to learn in the materials. However, strategies that lend them to solve the activities most of the time are not catalogued in the self-instructional modules as found in the Ghanaian context. There is the need to find out what test-taking skills support the students use to solve the in-built activities in their manuals focusing on developing requisite counselling skills, especially on communication process, listening and giving feedback, developing listening skills for counselling, developing responding: continuation response and questioning, developing skills in feedback: paraphrasing reflection of feelings; confronting, developing skills in feedback focusing and summarizing.

University of Houston Clear Lake (UHCL) Counselling services posit that problems related to students' test-taking skills are associated with students' response to try to find out what the activity covers, feel confident that one is prepared for the activities, imagine possible answers to the activities, take time to understand the activities, follow directions carefully, have good night rest, calmly recall what one knows about the activities and understand the structure of different types of activities and be able to prepare towards solving the activities with colleagues (www.uhcl.edu/counsellingservices). However, in the Ghanaian context and especially the study focus, varied reasons have been raised concerning the test-taking skills used by the DE students to solve the inbuilt self-instructional activities in their course modules. Reports indicated that, DE students' performance in two centres are not encouraging. Reasons suggest that the facilitators may not have in-depth skills in supporting the DE students or the students do not use the requisite skills in solving the activities.

These concerns had become necessary because, since 1996, when the programme started, there has not been any study to find out the strategies DE students adopt to support them solve in-built activities in the self-instructional

modules. Again, a survey of literature on distance education students' use of activities in self-instructional modules has revealed a paucity of studies on this topic (Tait, 2004; Owusu et, al, 2019). Besides, the few studies identified in the literature, search does not talk about the testing skills used in Ghana, and the few that talk about some test-taking skills are outside Ghana. This study, therefore, sought to fill in the knowledge gap.

#### Purpose of the study

The purpose of this study was to investigate how test-taking skills support students to solve in-built activities in counseling in the self-instructional course manual for DE students of the University of Education, Winneba (UEW).

# Objectives of the study

Specific objectives of the study were to:

- 1. Assess the use of test-taking skills by DE students of UEW to support solving in-built activities in counseling in the self-instructional course manual.
- 2. Assess the relationship between test-taking skills and students' performance in the in-built activities in counseling found in the self-instructional course manual of UEW DE students.

#### Research question

How do UEW distance education students use test-taking skills to solve in-built activities in counseling found in the distance education students self-instructional course manual?

# **Research Hypothesis**

There is a statistically significant relationship between test-taking skills and students' performance in the in-built activities in counseling found in the UEW distance education students' self-instructional course manual.

# Significance of the study

The findings of this research are intended to add to the existing information on the influence of study habits on academic performance students. The study will be significant to students, teachers, parents, school counselors, policymakers, and the government in assisting and encouraging students to realize the importance of test-taking skills on their academic performance. Students will benefit more from the findings of this study as they will offer the necessary assistance as and how to develop good study habits which will help to improve upon their academic performance. DE students will also benefit from the study on how test-taking skills affect their academic performances. The findings of the study will guide teachers and school counselors, who have the desire to see their students perform well by giving them the right techniques of developing test-taking skills.

#### Literature Review

Self-instructional materials possess one common characteristic, which is questions in the text, inviting the learner to respond to. "The activities posed in both national and international self-instructional materials vary considerably in the modes of the teaching they adopt, the lay-out and design, the demands they make and the way they are flagged in the text" (Lockwood, 1992:22). These activities are given different names in different contexts. They are variously referred to as in-text questions (ITQs, self-assessment questions (SAQs) in the USA the terms 'adjunct aid' and 'embedded questions' may be used Owusu-Mensah et al. (2019). In the Ghanaian context, it is referred to as questions posed for DE learners to respond to.

Self-instructional materials are influenced by psychologist B.F. Skinner and his model of the learning process based on upon operant conditioning. Student's learning is scheduled to be precise, organized in logical steps. In

practice, the teaching materials (called frames) each of which required a response from the learner before the programme, could proceed to the next step in the sequence (Tait, 2004).

From Lockwood (1992) point of view, activities help students to think for themselves, apply learning, monitor their progress, and check their understanding. Further, learners come up with their own views, explanation, and solutions to sort out the features of an argument, to draw inferences, to engage in controversy. This, therefore, means learners are given the opportunity to be exposed to competing ideas and views, relate their own ideas and experience to required needed ideas through actively involvement.

The distance education (DE) programme of UEW has a well-established and effectively functioning course materials, administrative and student support sub-systems. The study materials are written by trained personnel who have undergone intensive training on writing self-instructional modules to ensure uniformity in the layout and design that fosters uniform teaching strategies. It includes a number of in-text activities forming the self-instructional modules. This reaffirms Lockwood (1992) assertion on activities in self-instructional modules that are meant to enhance active learning on behalf of students to enable them to have a better understanding of what they study in the materials so that they can apply them. From these advantages, the question now is whether in tackling these activities do the DE students need test-taking skills?

This is crucial because, with the implementation of self-instructional modules, there is the need to evaluate the process through input evaluation, process evaluation, product evaluation, and impact evaluation. In addition, questions like, were the learners who were to respond to the activities, the group that needed to be trained? Were the self-learning materials appropriate and also whether it should focus on the performance of learners after completion of the course using self-learning modules? Since self-instructional modules are supposed to improve the competencies and performances of learners so that they can provide good performances. What skills do the students need to be able to solve the in-built activities in the self-instructional modules? These and many more provide justification for the use of self-instructional modules.

Research findings, and practical experiences of researchers suggest that many students have defective test-taking skills/study habits. For instance, Nwani (1985) noted that poor academic performance is widespread among students in Nigerian schools. This is not different from Ghanaian schools in the sense that poor academic performance of students has been of much concern to all and sundry. Many studies have been carried out, which make available today an important catalog of research on study habits (Ogunmakin, 2001; Kumar, 2002; Gbore, 2006). It is argued that test-taking skills have a strong relationship with academic performance of students while other researchers (Owolabi, 1996; Whihite & D' Onofrio, 1993) suggest that it is the combination of the study habits and other factors that could explain students' academic performance in any course of study.

Students' academic performance, thus, is influenced by factors other than just low intellectual capacity. One such factor is test-taking skills. So, test-taking skills serve as the vehicle of learning, which may be seen as both means and ends of learning and play a very important role in the life of students. Success or failure of each student depends upon on their own test-taking skill.

In contemporary Ghanaian society, there are many factors considered to be influencing the ability of students to cultivate effective and efficient test-taking skills. Amoah, Owusu-Mensah, Gyamera, and Mensah (2019) posit that problems related to students' test-taking skills are associated with their response to homework and assignments, reading and note-taking, time allocation, study period procedures, students' concentration towards examination and consultation with teachers. The inability to utilize effectively and positively these sources of study habits may lead to problems that may stand in the way of effective study and good performance as espoused by counseling.

Within the counseling process, communication exists between two persons. The receiver interprets the sender's message in the same way the listener intended it (Akummey & Ackom, 2010). Within the counseling process, be it verbal, or non-verbal, communication plays a significant role. Amoah et al. (2016) posit that communication is the human cement that glues our society and all other cultures together. It links individuals emotionally and

intellectually to other individuals, groups, and institutions. Further, communication is often functionally defined as "the sharing of experiences" or "the transfer of meaning" or "the transmission of values," but it is more than the sum of these actions (Akummey & Ackom, 2010,p 16). The point to draw home is that communication is very crucial in counseling. Amoah et al. (2015) believes that in counselling, communication correlates positively to scores students' obtain in practicum counseling.

In the area of listening comprehension and giving feedback, Owusu et al. (2019) looked at the relation between solving in-built activities, and listening comprehension from 156 learners from two study centres with similar characteristics and the results indicated that there was a significant inverse correlation between the two variables. Similar results were also gathered in listening comprehension and performance of learners in developing critical listening comprehension as pointed out by Asare (2006) who concluded that listening comprehension was positively correlated between listening and academic performance of learners in counseling. However, within the DE students, learners need to gather and assess the feedback themselves (Lockwool, 1990; Tait, 2004) through listening.

Another important point to note is that even though the study was not on anxiety and listening, as reported in Hartono (2019), anxiety correlates negatively with learners' performance in the classroom even though classroom results are not what high stakes require. Using the in-built activities considered as low stakes testing, studies that investigated testing context are both limited, and the investigation is limited to one particular skill of listening. Hence, developing listening skills for counseling is crucial. Further, Golchi (2012) found out that listening anxiety correlates negatively with listening comprehension. In support, Serraj and Binti Noordin (2013) in their study with participants of 210 Iranian English as a Foreign Language (EFL) students, discovered a moderate, negative association between anxiety and participants' performance on an **International English Language Testing System (IELTS)** like listening test.

In determining test-takers' skills in counseling, developing responding: continuation response and questioning seem important in counseling. One important point to note is that as Asare (2012) pointed out, in responding to any activity the scale is about judgmental to supportive, descriptive to critical, unorganized to organized and evaluative to interpretive comments. Further, Asare asserts that in responding to the task given, the test-taking skills activities correlate positively to students' performance. In developing skills in feedback: paraphrasing reflection of feelings; confronting, many studies have contributed to the fact that feedback correlates with academic performance, especially in counseling. According to Akummey and Ackom (2010), one critical ingredient in counseling is about the reflection of feelings. They maintain that feelings can be expressed variously. However, they assert that reflection on feelings is the act of uncovering and making known the feelings that underlie the counselee's comments or non-verbal behaviors. Reflection of feelings depends on observing and noting expressed and unexpressed feelings. Akummey and Ackom went further to explain that learning to reflect a counselee's feeling involves three steps; identify the counselee's feeling or the affective or emotional tone the counselee communicates, reflect these feelings back to the counselee in fresh or new words and make prescription check. Such peer feedback requires confronting, which is a responding skill of noting and gently pointing out to counselee that there are inconsistencies in what they are saying. In support, Boud and Kilty in Boud (2003) say feedback is very critical in every endeavor which Amini (2014) using 150 law students, posited that student's assessment preferences correlate positively and significantly with integrated assessment and non-conventional assessment.

As part from effective counseling, developing listening skills is critical. This is reinforced by Akummey and Ackom (2010), who believed that in any counseling exercises, listening needs to be effectively developed. In support, Winke and Lim (2017) found out that one of the issues in test-taking skill, anxiety, negatively correlated with performance on the listening test.

# **Methodology Design**

The ex-post facto research design (Charles, 1996; Turner, 2014) was adopted, employing the quantitative approach. In the ex-post facto design, the concern of the study was to establish the relationship between the independent variable, test-taking skills and the students' test performance on the in-built activities in the DE mentors counseling module books. There was no experimental treatment (Hatch & Lazarton, 1991) and random selection of the participants was not possible for this design.

# Sample/sampling technique

The participants were 18 (3 from the Ho study centre and 15 from the Sekondi study centre), graduate, DE students pursuing the one (1) mentorship, MEd programme. The courses they undertook included: Human resource development, action research, assessment and supervision, reflective practice, the concept of distance education, and counseling in mentorship. The participants were conveniently selected.

#### Instrument

To measure the participants' test-taking skills, the UHCL counseling services test strategies format was adopted. The instrument consisted of eight (8) items measuring test-taking skills using a scale of 1 to 4. The scale was used to indicate how often each statement applies to whoever uses the instrument. The scale includes never=I, sometimes=2, usually=3, and always=4. The critical mean value set to interpret an individual's score is 2.5. If any individual scores a total of 28, it meant the one had developed good test-taking strategies. With a score of 21-28, the individual is probably pretty good at the taking test. With a total of 20 or less, the individual will benefit from strengthening his/her test-taking strategies. The instrument was pre-tested on five (5) of the DE mentorship students in one of the centres where the students attend lectures. A cronbach reliability value of 0.92 was calculated for the adapted instrument.

# **Data collection strategy**

Each of the students was made to respond to the statements on the instrument to measure the test-taking skills in this study. The calculated performance score of each of the students on each of the in-built activities in the self-instructional module was measured. The questions in the self-instructional modules had been standardized and served as in-built activities for the DE students to support them assess themselves on the programme.

# Data analysis procedures

The data was collected from 18 respondents representing the sample. Arithmetic means were calculated to indicate the students' test-taking skills scores. Then, the Kendell's tau-b ( $\tau_b$ ) correlation coefficient was also calculated, establishing the correlation coefficient. This is justified by Field (2009), who asserted that Kendell's tau was better for small data set since it produces a more accurate statistical calculation than Spearman's coefficient. Further, Edwards (1984) asserts that with a small sample, a pair may contribute excessively to the value of the correlation coefficient. Ensuring robustness of the statistical test, bootstrapping technique in calculating descriptive statistics test and correlation coefficient was adopted since LaFlair, Egbert and Plonsky (2015), and Hartono (2019) all maintain that bootstrapping could be implemented to obtain robust statistics when researchers have to deal with issues relating to small sample that is not normally distributed.

# **Findings and Dissuasion**

Research Question: How do UEW distance education students use test-taking skills to solve in-built activities in counseling found in the distance education students self-instructional course manual?

Analysis in Table 2 summarises the results on the descriptive statistics of data. The results showed that minimum and maximum scores for the test-taking skills ranged between 21 and 32 and the mean of means score of 2.523

showing that the students used test-taking skills to support their performances on the in-built activities found in the self-instructional modules.

Table 2: Arithmetic Mean analysis (Bootstrapping) on Students' Test-taking skills score

Variables	C value=2.5		95.0%CI		Min.	Max
	Mean	Std. Dev	Lower	Upper		
			bound	bound		
Test-taking skills	29.78	1.23	2.72	3.16	28	32
Communication process	2.665	1.015	2.43	2.93	26	31
Listening and giving	2.571	.4952	2.12	3.12	27	29
feedback						
Developing listening skills	2.163	.7899	1.90	2.34	23	27
for counseling						
Developing responding:	2.085	1.546	1.96	2.65	26	30
continuation response and						
questioning						
Developing skills in	2.020	.5920	1.86	2.72	22	26
feedback: paraphrasing						
reflection of feelings;						
confronting						
Developing skills in	2.942	.6526	2.45	3.01	28	31
feedback focusing and						
summarizing						
Overall score	2.543	.379	2.42	3.11	28	32

Source: Fieldwork data (2019)

However, there were variations in the use of the test-taking skills in solving activities like developing listening skills for counseling (2.163), developing responding, continuation response and questioning (2.085), and developing skills in feedback; paraphrasing reflection of feelings; confronting (2.020) which fell below the critical value. These findings collaborate and support Amoah, et al. (2019) and Owusu-Mensah's (2006) assertion that DE students use varied test-taking strategies in resolving in-built activities in self-instructional modules.

Hypothesis: There is a statistically significant relationship between test-taking skills and students' performance in the in-built activities in counseling found in the UEW distance education students' self-instructional course manual. To address the statistical calculations, Table 3 provides.

Table 3: Kendel's tau-b (τ<sub>b</sub>) correlation matrix between variables (with bootstrap)

		, ,			,	* /		
	TTS	Communic ation process	Listening and giving feedback	Developing listening skills for counseling	Developing responding: continuation response and questioning	Developing skills in feedback: paraphrasin g reflection of feelings; confronting	Developing skills in feedback focusing and summarizin	Overall score
TTS	-	.478 (.092)	.834 (.049)	.765 (.005)	.780 (.236)	.342 (.238)	.675 (.096)	.789 (.004)

Source: Fieldwork data (2019),

P-values are in parentheses after the correlation coefficient

TTS=test-taking skills

From Table 3, the relationship between TTs and communication process was moderate ( $\tau_b$  =.478; p=.092). The correlation between TTS and listening and giving feedback from the in-built activities in the module was positive

in nature ( $\tau_b$ =-.834, p=.049) and significant. The correlation between TTS and developing responding: continuation responses and questioning was positively high correlation ( $\tau_b$ =.780, p=.236) but not significant.

The results further indicated that there was a significant positive correlation between TTS and developing listening skills for counseling ( $\tau_b$ =.765, p=.005), and significantly negative correlated ( $\tau_b$ =-.567, p.049). However, the TTS and overall score were positively and statistically significantly correlated ( $\tau_b$ =.789, p=.004).

#### Discussion

The results show an interesting scenario as the relationship between test-taking skills and the scores in the inbuilt activities between various segments of the counseling course varied across the in-built activities. This supports Larson-Hall (2012) argument as reported in Hartono (2019) that it is misleading to consider results of a statistical test not significantly significant only because its effect size is higher than the arbitrarily set 0.05 cutoff point. The results paved the way for other analysis on correlation to be done since the study focused on only counseling perspectives of the students used in the study. In establishing that there is a significant relationship between test taking-skills and academic performance of University of Education distance education students, the results indicated that the overall test-taking skills score of students showed that they had the requisite test-taking score used to solve the in-built activities. The findings were fascinating in that with the critical value of 2.5, Communication process (mean=2.665, std=1.015), Listening and giving feedback (mean=2.571, std=.4952) and developing skills in feedback focusing and summarizing (mean=2.942, std=.6526) showed students actually develop the requisite test-taking skills to answer the in-built activities. This is in support of what Owusu et, al (2019) posited, that DE students need the right test-taking skills to be able to manage how they work on the inbuilt activities. Further, the results support what Chang (2008) found which talks about anxiety in test-taking and listening comprehension in classroom assessment. A possible reason for the students not having test-taking skills in, for example, developing listening skills for counseling (mean=2.163, std=.7899), developing responding: continuation response and questioning (mean=2.085, std=1.546) and developing skills in feedback: paraphrasing reflection of feelings; confronting (mean=2.020, std=.5920) might be that of preparation towards the course. As DE students, time management strategies are crucial for effective learning and solving in-built activities. This means they might not have taken a serious view of using test-taking skills to engage the in-built activities. Such behavior might lead to desensitization due to familiarization of the activities and so made them not use the skills in test-taking (Hartono, 2019; Winke & Lim, 2014) which could be explored further.

# **Conclusion and Recommendation**

The study has revealed that the DE students used test taking-skills and turns to establish that there was an association between test-taking skills and student performance. Since the in-built activities in the DE module are often used to make decisions about students, results actually reflected DE students' performances, hence students need to develop relevant test-taking skills to support them solve in-built activities in the modules.

It is suggested again that since the in-built activities in the course manuals are believed to be standardized, effort need to be put in place to pilot test the questions for validation purposes. For internal consistency sake, rigorous test analysis needs to done on the in-built activities before making them part of the manuals.

It is suggested that as part of the development of the modules, emphasis need to be the focus of support and that DE students identify the right test-taking skills to support them solve the in-built activities. Identifying the right test-taking skills can be highlighted by the facilitators/lecturers handing the DE students for self-recognition and use of skills in solving activities in the self-instructional modules.

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