# Fundamental Distinctions between Teaching and Drilling in the Classroom: A Search for a Philosophical Criterion.

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## ABSTRACT

This paper makes a fundamental distinction between teaching and drilling within the class room. Whereas many teachers go to the classroom to teach, it has been observed that what really takes place in the class rooms is much of drilling than teaching. This paper while it criticizes the common pedagogical approaches oriented towards drilling, it also proposes a new approach; the philosophical minimum, which leads to meaningful teaching and learning. The Philosophical approach presents three criteria namely; the intentionality Criterion, the Indicative criterion and the Readiness Criterion. This approach attempts to solve the common problems and challenges encountered by teachers as well as learners in the teaching-learning process. This paper makes recommendations which are quite significant in the improvement of the education quality at all learning levels.

**Key Terms**: Teaching Pedagogy, Education, Philosophical Criterion, Learning and Drilling

## BACKGROUND TO THE STUDY

Academicians in the field of education are increasingly aware that, while class-based knowledge in-put is a vital component of learning, the traditional lecture-based didactic pedagogical approaches are insufficient. Parents, teachers and education stakeholders complain of students' low performance in national examinations. The fundamental question is, what is the cause of this fallen standards and poor academic performance? Is the fault entirely that of teachers or students or both of them? Or is it in the teachers' method of teaching and interaction with the pupils? In response to this challenge and problem, this paper attempts to present a new pedagogical approach to teaching and learning process namely the Philosophical criterion approach. It has been observed that very little learning takes place within the classroom (Stefaan, 2012). In as much as teachers make effort to interact with students in the classrooms, much more is demanded of them. Drilling defined by Scheffler, (1965) and quoted by Ryle (2012) is imposition of repetitions through which habits are built up. Teaching on the other hand is defined as an intention to bring out learning (Aristotle (2015). Form the foregoing definitions, drilling and teaching are two distinct concepts. There is need to develop a new pedagogical approach towards the teaching learning enterprise. In order to achieve 'real' active and meaningful learning, various interactive techniques and approaches must be developed visa vis the traditional drill approach. There is an urgent need for a new educational model and pedagogy; a rethinking of the nature of schooling – its purpose, pedagogies, curriculum, structures, assumptions and expectations. The old pedagogies including drilling persisting into the 21st century are no longer relevant.

## OBJECTIVES OF THE STUDY:

This study set out to;

1. Evaluate the Philosophical Criterion Pedagogy and its relevance to the 21$^{st}$ century learner.
2. Critique the Drilling Teaching Technique and pedagogy in Education.
3. Establish a new Pedagogical approach towards quality teaching in the classroom.

### The Pedagogy of the 21$^{st}$ century

A relevant education pedagogy for the 21st century must have three essential strands. These strands must be tightly woven together to ensure that the schooling experience is relevant to the life each student chooses to pursue and the skills required to live in today's world.

### The Concept of Teaching in Education

The term teaching has been given various definitions by various education scholars. For instance, Aristotle (2025) defined teaching as an intention to bring out learning. Teaching thus, seen in this light is a cause–effect activity. Teaching causes learning to take place. Aristotle further clarified teaching as a process of imparting knowledge to bring out positive change in behavior. Teaching has also been seen as a professional activity undertaken by professionally trained individuals. Teaching as a concept seen from a professional perspective, involves the communication of knowledge, skills and attitudes by the professionally trained teacher to the learner. The underlying principle in the concept of teaching is the fact that, the process of teaching must cause a positive change in behavior in the learner.

### The Concept of Learning in Education

The term learning just like the term teaching has been defined in different ways by various education scholars (Akinpelu, 1982). Rousseau defined learning as the acquisition of knowledge, skills and attitudes to make an individual to be a useful member of the society (Roussea, 2003). Learning seen in this light gives a pragmatic perspective. Ryle (2012) defined as, the achievement of intended aims, skills and change of behavior. John Locke, an empiricist philosopher defined learning as having experiences that can be remembered. There is a close relationship between these two terms; in both there is the positive and permanent impact on the learner. Therefore, for meaningful teaching and learning to have taken place there must be a feedback from the learner indicating the positive change in behavior. Much of the classroom interaction has a strong focus on the teacher-learner/ teacher-class condition. This form of interaction often reveals asymmetrical power relations in classroom discourse patterns defined as Initiation-Response-Evaluation (IRE) or Initiation-Response-Feedback (IRF).

The teacher initiates dialogue, receives response from the learners and then evaluates the learning process through feedback. This form of dialogical approach has a number of educational benefits. For instance, it helps the teacher to gain control over the classroom learning process, especially in teaching a large class and handling potentially disruptive learners. It also ensures uniformity of content i.e. the teacher subjects all learners to same learning experiences. This can enhance the attainment of lesson objectives. Finally, if properly utilized, it can foster interaction between the teacher and learners.

However, this approach may lead to a teacher-talk dominated classroom especially through questioning, lecturing and dictation. Thus, leading to a possible teacher-centered classroom learning situation. The teacher needs to be quite cautious while utilizing this approach.

## The Concept of Drilling in Education

Schofield, (1972) defined drilling as "the formation of good or bad habits through regular practice of stereotyped exercises". Drilling defined by Scheffler, (1965) and quoted by Ryle (2012) is imposition of repetitions through which habits are built up. He further reiterates that the " practices are not learned until the pupils' responses to the clues given are automatic to the point that he can do them in his sleep as it is revealingly put." Akinpelu, (1981) was of the view that drill is a method which is often used in traditional teaching method to get pupils to learn the first rudiments of a subject. By this definition, he localizes drilling by restricting its application only to learning first rudiments of a subject. However, Akinpelu describes drilling as a form and process. "drilling is, repetition of a piece of learning until one can recite or perform it without mistake. As used in the army; army drill inculcated certain movements and ways of behaving in the recruit (learner) until they become almost automatic". To this end, drill is narrow in aim and content and so it calls not for much understanding or intelligence from the person being drilled. Hirst and Peters, (1966) opine that drill is a process of very limited achievements in specific physical movements, which means drilling cannot be applied to learning some abstract concepts and aspects of education. Peters, (1968) also sees drill as making individuals mindlessly repeating and narrowly conceiving stereotyped acts. According to Aggarwal, (2004) drill is exercise in which a body of men is taught to act in perfect unison, either for physical development or for the execution of various movements, at various formations by signal or word of command. Claxton observes that, Drill is seen as unproductive in a learning situation because of the long period of time spent in the process by repeating a particular task (Aggarwal, 2004). In sum therefore, majority of the tasks involved and dealt with in drill are of physical skills or exercises. Even if there is cognitive aspect, the physical dominates the realm.

## The Triadic Relationship in the Classroom Learning Process

As already pointed out, for meaningful teaching and learning to occur, there must be a feed-back from the learners. There is a three-fold approach to the whole exercise and process of teaching and learning. These three approaches will be discussed and referred to as conditions involved in the learning process. The first of these conditions involves the teacher who intends to cause learning in the pupil, it is known as the intentionality condition or criterion. The second condition and perhaps the most important of the three is the learner who is presumed to acquire knowledge, skills and attitudes from the teacher. The third and final condition in the triadic teaching-learning relationship is the subject matter, here referring to the content to be taught thus the curriculum, the syllabus and the teaching resources. This component resonates between the first and second components. This then leads to the philosophical Minimum Criteria. The philosophical Minimum Criteria has three basic tenets that define teaching and learning in the classroom. They include, the Intentionality criterion, the Indicative criterion and the Readiness criterion. This paper proceeds to discuss the three criteria showing the inter-relationship and influence to the teaching learning process in the classroom.

## The Intentionality Criterion

Teaching as a classroom activity commences way back before the teacher sets foot in the classroom. Learning as an outcome must be intended by the teacher before and during the classroom process. The teacher must have the will and the desire to teach. The mind and the heart of the teacher must be oriented towards the teaching. The intentionality Criterion is what aids the teacher to prepare adequately. It's this criterion that will aid the teacher in preparing the lesson plan, the teaching notes and the teaching aids. The learners will not only enjoy the learning but will also comprehend the content adequately. The teacher who lacks the will to teach, will fail to prepare adequately and by so doing will fail to deliver in the classroom. There will be no learning taking place no matter how much time he spends in the classroom. Caxton (2012), while drawing a distinction between teaching and drilling observed that, drilling only promotes rote

memorization more than meaningful understanding and to some extent dull activity (Aggarwal, 2004). The teachers who go to class with memorized facts or notes to read to the learners only but drill knowledge to the learners, this kind of approach to teaching cannot adequately cause learning among the learners. This first criteria is by large concerned with the teacher, while the second criterion has do to with the learner.

**The Readiness Criterion**

The Readiness criterion or condition is by and large based on the disposition of the learner. The learner must be ready and willing to learn. The teacher may have prepared adequately i.e. fulfilled the first condition necessary for learning but if the learner is not ready and willing to learn, then there will be no learning in the classroom. The learners' willingness and readiness to learn is what will cause learning to take place. This concurs with Aristotle's 'quid quid` principle; 'whatever is received is received according to the mode of the recipient'. The question is, how prepared is the learner to learn? This preparedness involves the psychological, emotional and physical. This concurs with St. Thomas Aquinas principle that, the principal cause of learning is the learner. This puts emphasis on the learner and how prepared he is towards the learning process. The third condition resonates between the first and the second condition, which is the Indicative condition or criteria.

**The Indicative Criterion**

Both the teacher and the learner must be seen doing things with the subject matter while in the classroom. For instance, the teacher must be seen doing things that reveal and cause the intention which is learning. This is the criterion that indicates the actual teaching and learning process in the classroom. The teacher must be seen doing things such as asking the learners questions, writing on the chalk board, explaining facts to the learners. The learner on the other hand must be seen taking notes, responding positively to the questions thus actively participating in the learning process. Drill as already pointed out, cannot be applied in such an approach to learning. Drill heavily relies on listening to commands and memorizing and performing them perfectly. Drill does not give room the learners to question or confront the content given by the teacher.

These three criteria is what sums up as the philosophical criterion to the teaching–learning process in the classroom. An interfuse of the three on the part of the teacher and the learner is what leads to learning. Drill on the other hand is only limited to practicing clues and commands where very little learning takes place.

## RESEARCH METHODOLOGY

This section presents the methodology employed in this study.

It clarifies the nature of philosophical research by demonstrating its uniqueness from qualitative research. Philosophical research is *sui generis*. It is neither quantitative nor qualitative research. Neither is it Mixed Method Research (MMR).

Generally, research aims at finding a solution to a certain problem. Every field of study has peculiar and unique methods of research, distinct from those in other fields, which gives exclusive outlook of the area. Philosophy as the mother of all fields of study and like all fields of study has provision for research though conducted in different pattern and format. Philosophers like Akinpelu (1981), Dewey (1916) and Ross (2011), have tilted towards the fact that Philosophical research method is in existence though not universal. This study deals with philosophizing an educational issue, hence philosophical method is the most suitable design. By Philosophical method, we mean being biased to Philosophy. Since philosophy deals with the abstract study of fundamental nature of reality, whatsoever we call 'Philosophical' is having the same taste. This study being a philosophical reflection adopted philosophical research design. A Philosophical research

describes what should be or ought to be. It is normative in nature (Sheshadri, 1988). At various phases of the study, the researchers engaged in critical analysis and synthesis of various ideas.

This study was in the area of philosophy of education. It employed philosophical research design. Research design in philosophy of education diagnoses general, fundamental and conceptual problems pertaining to educational policy, theory and practice (Oriare, 2007); Randall, 1996; Dewey, 1916). Philosophical research design in education is appropriate in critical examination of logical, epistemological, axiological and ontological study in educational policy, theory and practice (Munk 1965). Research design in philosophy is tailored to investigate conceptual and normative problems; it does not aim at addressing gaps in empirical factual knowledge (Golding, 2013;). Factual questions require empirical approach but philosophical questions are normative and conceptual. They attract rational reflection and evaluation, analysis and critical argument.

# DISCUSSION, CRITICAL ANALYSIS AND SYNTHESIS OF IDEAS

The most important step in this study was putting all the available thoughts and ideas in a systematic way for analysis and synthesis to reach a logical conclusion. For the purpose of analysis, collected data were categorized according to the objectives and issues related to the study. Analysis of data involved breaking of complex concepts into simpler concepts, defining the concepts and examining them critically. The researchers examined the meaning of the concept of teaching, learning distinguishing it from drilling as applied in education. The process used here is cyclic reasoning, of thinking, discussing, deducing and re-writing.

Meanwhile, due to learner diversity, no one classroom interchange can ever mean quite the same for any two individual learners or at any two different moments. Thus, it becomes almost impossible to suggest any one particularized prescription as good learning practice in the sense of a practice that can be replicated. However, it is possible to identify various contexts in which classroom dialogue occurs as a way of enriching classroom learning experiences and as a manifestation of rich learning experiences.

In order to develop a proper foundation of the problem under study, the researcher consulted various libraries. The study tried to explore relevant matter on the problem of the study like knowledge, its meaning and nature, learning and teaching as distinguished from drilling. The researcher reviewed books and journals containing articles and essays related to the problem under study. In addition to the written materials, the researchers utilized literature on the internet using websites that provided valuable information and material on the problem.

# CONCLUSION

From the data collected and critically analyzed, this study arrived the conclusion that the traditional pedagogies cannot be adequately applied in the $21^{st}$ century learning pedagogies. From the discussion, the researcher deduced further insights from scholars point of view and opinions and the improved knowledge related to the problem. This cyclic discussions helped the researchers to fill the lacunae in the facts of knowledge. This approach, describes the whole mark of education, namely to produce reflective persons who in turn express their reflections in the empirical order as problem-solvers. There is an urgent need for a new educational model; a rethinking of the nature of teaching and its purpose, pedagogies, curriculum, structures, assumptions and expectations. The old pedagogies persisting into the 21st century are no longer relevant. They ignore the capacity for schooling to take place in both a physical and virtual learning space. If we are to embrace these new opportunities, we need a 21st century pedagogy – a paradigm which reflects a bold and creative commitment to relevance and quality learning and teaching. This is the focus of the philosophical criterion, as the search for practical pedagogical strategy that promotes, evaluates and

develops learners who are not only reflective, but problem-solvers as well. It was finally concluded that the philosophical criterion of teaching and learning adequately fills the apparent gap in the distinction between teaching and drilling.

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