

## Fitting ICT and Technical Writing Skill Into Teachers' Production Programme for Achieving the Millennium Goals

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**Abstract** *This paper puts forward another idea that can enhance the achievement of the educational goal with specific skill such as introducing the course 'Technical and Scientific writing for all students in Colleges of Education. The paper suggests some measures in the method of impacting the skill that can be improved upon for the realization of the national millennium development goal in developing countries. It highlights the goals of teacher's education in consonants with technical writing. The paper approaches the agitation in a semi-empirical style of presentation using such elements as statement of problem, purpose questions and significant of the idea. It further states the scope necessary for implementation of the agitated idea. The part that teaching and learning play in this proposal and the specific perspective of each were fully explained and conclusion drawn with summarized strong worded appraisal which agitates that Technical and Scientific Writing as a course be made compulsory to all students of teachers training programmes especially in Colleges of education.*

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### Introduction

The most common and effective slogan of the millennium development goal is "education for all..." initially completed with the phrase "...in year 2000" but Nigeria with more than ten years behind that schedule has not dropped the idea. Several efforts have been put in places awaiting the fulfillment of that dream. One of such efforts for the achievement of that dream is here in this paper postulated.

The provision of education for all has been a major concern of most countries since the international declaration in 1990. According to Obinanjo (2008), the issue has gained global impetus with five international agencies such as (UNESCO; UNDP; UNFPA; UNICEF and the World Bank) spearheading the movement. She further affirms that precisely 189 heads of governments including Nigeria reached an agreement to end extreme poverty, target education, environmental sustainability, etc. popularly known as the Millennium Development Goals (MDGs). Technical and Scientific Writing is an information communication technology skill that entails all learning experiences that have to do with proper writing presentation of the information communication technology. Ensuring education for all in this modern technological era should best be done through the actual knowledge and understanding of all that are entail in written presentations.

Since the independence of some developing countries, the society generally has witnessed a lot of phenomenal developmental changes in areas of Politics, Agriculture, Science and Technology. Communication as well has keen competition in education sectors. ICT now plays a dominant roll and presented written information in every student-teachers' life becomes very vital. In all, quality and modernization of concepts and ideas written information to covey the intended meaning adequately have in recent time always been identified as one area mostly in need of attention for student teachers' improvement in developing countries to achieve certain goals by socio-economic analysis.

The idea in Technical and Scientific Writing is as important as human in resource for national development. Man in nature's demands and requirements, must respond to instruction accordingly.

Everything man does is for the achievement of objectives. Technically in writing is as eminent as man. Accordingly, information presented in written form is as man desire and require such in correct order and form. The proper presentation of information to actually depict real intent in appreciative form, adequately calls for one who is also perfectly groomed for the work for perfect or adequate result. Technical and scientific writing training is the only art that can offer such skill. Just as word are produced in the right terms, sequence and tenses for a given or intended meaning, so must the presentation of such be sine-qua-non and apt to be effectively handled for the best way of giving adequate training as to achieve these goals.

The National Policy on Education (NPE) in its philosophical base stipulates among others education is for the development of the individual into a sound and effective citizen and for the provision of equal access to educational opportunities. It intends to achieve its goals among others through the inculcation of the right type of values and attitudes for the survival of the individual and the acquisition of appropriate skills and the development of mental physical and social abilities and competencies as equipment for the individual to live in and contribute to the development of the society. To this end teachers' education which is the pivot around which this aim can be achieved need be properly equipped to provide the best intended. In consequence, the quality of instruction at all levels especially in teacher education programmes has to be oriented towards inculcating the values of the acquisition of competencies necessary for self-reliance. The NPE further affirms that teachers' education shall continue to be given major emphasis in all educational planning and development. This in effect endorses the facts agitates here in this paper on offering technical and scientific writing to all levels of educational programmes. To this end, the goals of teachers' education need be revisited.

### **Goals of Teachers' education in Consonant with Technical Writing**

The National Policy of Education spelt out the goals of teachers' education among others to include, the production of highly motivated, conscientious and efficient classroom teachers for all levels of our education system. It also intends to encourage further the spirit of enquiry and creativity in teachers; and provides teachers with the intellectual and professional background adequate for their assignment and make them adaptable to changing situations.

On the other hand technical and scientific writing is a specialized form of exposition or writing which is concerned with the communication of idea in a form that the reader can understand and use. Technical writing covers a broad spectrum of expression that transcends science and technology. It provides the technical knowledge and vocational skills necessary for development to certain individuals. It also gives training and imparts the necessary skills to individual who shall be self reliant economically. The techniques of technical writing that comprises orderly delivery of ideas, consideration of audience intelligence levels for medium of expression and explanation of new concepts used has the quality of clarity, logically, accuracy and brevity highly maintained.

The fact that the understanding level of audience and terms assumed to be out of place for the audience are put into consideration before imparting new knowledge are technical writing skills that are in agreement with the making of teachers.

According to Ozuruoke (2007), universities, colleges of education, polytechnics and other vocational institutions have curricula in the field of business and vocational education that they embrace. This does not cover technical and scientific writing.

### **Statement of Problem**

Several nations are witnessing lots of phenomenal developmental changes in every sphere of life from the industrial revolution through the jet age down to the present computer and other electronic media age that now hinge on Information Communication Technology. Even Newspaper, magazines, periodicals of various

nature as well as reports of organizations are rolled out daily for the consumption of the general public.

Techniques are required to make these write-ups palatable. Again, teachers are in the most expected point of discharging these functions of making any one adequate in this area of writing. Good writing techniques certify the conditions of enable any written contact system all over the globe. The *art of these writing techniques* in operations ought to be perfect and accurate to really conform to the quality desire associated with the global rapid growing socio-economic reading and writing life. This is the state everyone who conveys message or information through written documents ought to be operating on in life now. But not all can do it due to the ignorant and or inability of some to realize that there are techniques that are involve in communicating that makes it adequate, creating a gap in the fast intended global communication link. Some have to wait or seek for others to assist them in editing or even doing the writing itself. This becomes the problem identified and proposed to be tackled herein with the assurance that critical look and implementation of the agitated idea will yield the anticipated positive improvement especially in the process of making the teachers.

### **Purpose**

This skill development technique, if adopted is capable of ensuring that information communication techniques can be applied, perfectly handled by almost every productive person in the teaching profession if not all as a sure quality education for millennium development goal in the developing countries.

### **Inducing Questions**

1. What is or are the specific degree or course programme pre-requisite to the learning of writing techniques and their application and operation?
2. Who are the specific set of persons that ought to know and use writing techniques for communication of information?
3. What are the relevant programmes associated with the skill acquisition of technical and scientific writing?
4. On what occasion or condition does the use of technical and scientific writing becomes necessary in the society.

### **Significance of this Development Option**

Fruitful objectives in investment are gainfully reaped when results are promptly communicated. This skill educational option of ensuring that every teacher becomes technical and scientific writing compliance will definitely encapsulates both private and societal economic growth which is the main goal of any developing nation.

### **Scope of Implementation**

This education development technique can be adopted by any nation, state or area as technical and scientific writing is paramount these days. However, this is highly recommended for especially those within the teaching profession. Concentration can be on those who may be running the teaching profession programmes in tertiary institutions.

### **Teaching and Learning as Relating to Technical and Scientific Writing Skill**

The art of imparting and receiving education, as relating to ICT and Keyboarding will fully be comprehended with a revisit to their meanings. Arolasafe (2004) has ICT defined as "Information and Communication

Technologies are computing and communicating facilities and features that varies by support teaching and learning, and that it includes a range of activities in education". Technical and scientific writing is one and major among the activities so stated, especially in the present written media revolutionary trend. It's concept and application involves the use of elements such as charts, graffiti, cartoons, silhouette, connotation, etc.

Most among technical and scientific writing related activities include clarity, logical, accuracy succinctness or preciseness and other devices to reveal effective and sequences on technical writing, developing special awareness and psycho-motor control. It is further stated that technical and scientific writing has a number of features which makes it particularly suitable for teacher education. This includes:-

- (a) Combination and integration of full range of media essential for effective learning since technical and scientific writing uses sound and vision from electronic media, text and periodicals like newspaper, magazines, signposts, etc.
- (b) Provision of new opportunities to teachers and learners as well as involving all in the prevailing global village through writing.
- (c) Provision of new economic and business participation involvement opportunities in the world no matter the distant apart as newspaper and other periodicals are found in almost every nuke and cranny.
- (d) Interest increase and involvement on the part of students and even teachers' relationships as provided by lesson aids, instructions, information in written form that even enhance enthusiasm.
- (e) Then opportunity of enabling students or learners generally to work and learn on their own with the aid of reading and writing.

From the above facts it should be understood that the major objectives of scientific and technical writing are to produce a clear, logical, accurate, and succinct piece of literature for a specific use or purpose.

These new technology have become central to contemporary teachers whether you are working in an office or in the field of studies. Every person in one way or the other is using scientific and technical writing.

Arolasafe (2004). Summarized the general use of ICTs in which technical and scientific writing is included that will enhance national development in the present dispensation that it:

- Help in school administration
- Train students in skill for future use and for learning process
- Provisions of assess to information and communication out-side via written media
- To support teacher development via external written materials
- Support and potentially transform the learning and teaching process.

For so, it is crystal clear that skill of technical and scientific writing is eminent and ought to be embarked upon since our nation have a very high need for achieving the intended millennium development goal. A clear process of doing this is through a formal educational system of teaching and leering. It becomes imperative here for this paper to specifically outline the perspective through which it can be achieved.

### Teaching Perspective for Developing Technical and Scientific Writing Skill

This part of the paper considers the teaching or training aspect of developing the KEYBOARDING SKILL for the ICT compliance, for pre-service and the in-service personnel and others generally refers to as learners. This should be seen as an essential component for successful application of ICT skill across societal technological acquisition generally. This implies that Keyboarding for ICT is a tool for enhancing education and training of students, teachers and others as well as a tool that teachers can use to enhance their development and job at hand. Arolasafe (2004), sees training as a key requirement.

Teachers have been polarized in their acceptance of the new technologies while some have enthusiastically integrated computer and the internet into the classroom, others have been cautions in their welcome and some have simply rejected the technologies probably for fear and lack of keyboarding skill.

There is a level of unjustifiable cynics base on previous experience of disregard for secretarial skill

(Shorthand Typewriting) yet the reversible love for electronic typewriter as down to the present computer has not completely wiped out the disrespect and dishonour for the so called "Commercial Subjects" Osofisan (2004) in support said that with the inevitable proliferation of ICT even in the classrooms, the role of the teacher must change to bridge the lax gap created by the previous perceptions. Arolasafe (2004), has four recommendations as reasons for this to happen. Thus:

- (a) Because ICT will cause certain teaching to become absolute and new electronic forms of distributed information communication must be employed.
- (b) ICT may also make some assessment methods redundant as on-line test can easily be used as information associated with previous score records of each successive tests results can be entered automatically.
- (c) It will be crucial for teachers to encourage critical thinking skill, promote information literacy, and nurture collaborative working practices to prepare children for a new world in which no job is guaranteed for life and where people switch careers several times, as the internet gives access to an exponentially growing storehouse of information sources due to almost unlimited networks of people and computers and unprecedented learning, research and jobs or working opportunities. Unfortunately, misinformation and inaccuracies are similarly present in great numbers on the internet so one of the new roles of the teacher within the electronic classroom will be separate out quality information from misinformation identification, classification and authentication of electronic information sources will be critical new tasks for teachers.
- (d) Teachers must begin to reappraise the methods by which they meet children's learning needs and match curricula to the requirements of human thought. The internet can be the most excellent way to adapt information to meet their characteristics of human information processing. Traditional methods of imparting knowledge such as lectures, books and the conference papers are characterized by a linear progression of information. Human minds are more adaptable than this and refocusing for national development achievement becomes students with the non linear means to match human thinking process.

In addition to the above, various significant and unique opportunities are provided by ICT which technical and scientific skill can enhance for national development when used for developments of human resources. Among them are:

- It provides stimulation of specific psycho-motor skill through mini and micro-lessons which can be watched, manipulated and tested with signs, illustrations, abbreviations etc. ICT with technical and scientific writing can also provide demonstrations of real teachers in real classroom settings representing a range of subjects, approaches and methodologies. These demonstrations can then be dissected, analyzed, watched again, and assessed over time without disrupting an actual class.
- It enables teachers education to be provided at a distance to the trainees location, thereby saving travel time and cost and also avoiding disruption of classroom routines as teachers can learn at their own time.
- It allows education to take place any time and any place as well as allows learning on demand whether they are ready or not.
- Since teachers often have to deal with changes in knowledge methodologies, pedagogical issues, students or learners and school culture, professional isolation on initial and specialized training ought no longer to be invoke ICT keyboarding skill allows education especially the finger skill to communicate, exchange information, interact in chat rooms and on bulletin boards, and hold discussion forum and visual conferences on screen with the use of the finger on keys of the ICT equipment.
- Use of technology for teacher also enables the teacher to acquire extra finger usage technology.

With the bountiful benefits so far highlighted here, the numerous barriers and challenges which Arolasafe (2004) stipulated may be considered to affect the smooth implementation of the idea in context here as stated below thus:

- Lack of teachers' confidence and computer anxiety
- Lack of technical and scientific writing skill competence as combination to computer knowledge.
- Lack of access to resources to technical equipment required
- Lack of time for the inculcation of both in learning periods
- Technical problems especially power source
- Resistance to change and negative attitudes
- No perception of benefits
- Impact of public examinations
- Age differences and gender differences

Challenges such as programme seem to often cover one aspect only; not training teachers in the productivity skills development of both. Course may be programmed as only being supply-driven without teachers demand as inputs. Benefits often overstated leading to fanaticism and frustration when not readily realized. Training is never enough once-off especially international and some never-do0without learning purposes.

All these are ideas of the past with the inculcation of ICT and technical writing skill national development technologically through teachers' programmes us really assured to be achieved.

## Conclusion

Proper adoption into the rapid changes in technology including technical and scientific writing skill will ensure that ICT and technical writing skill will proliferate into all classroom activities being scientific in nature and subsequently into a general all round digital techniques in information presentation operations. It is predicated that there will be many benefits for both the learner and the teacher. ICT with technical writing skills will also require a modification of the role of the teachers, who in addition to classroom teaching will have other skills and responsibilities in information communication management and control. Many will become specialist in the use of distributed learning technique the design and development of shared working spaces and resources and visual as well as real guides for students who use electronic media in relation to technical and scientific means.

Ultimately, the use of ICT will enhance the learning practice experiences for teachers, students as well as for other intended learners, helping them to operate, think and communicate creatively. This no doubt enhances national development. ICT keyboarding will also prepare our children and/or all categories of learners for successful live and skilled career in an increasingly technological world as the present global digital dispensation. The goal education for all no matter how delayed, must definitely be achieved at the long run.

This paper so far, tried to bring to light the importance of refocusing on ICT keyboarding in education processes generally and how the different and varying components underlining this current global digital revolution can be used for teaching and learning in both the classroom and outside learning environments. It also brought to light what individuals and co-operate bodies can achieve as per national development with these skill and however stressed that this absolutely depends on the support of trainees and trainers as well as from all educational administration institutions, organizing or managing bodies as well as the prevailing intentions. In fact, this paper assures that you can be your own boss today with a national education development goal generally on ICT Keyboarding in particular.

## Summary

Technical and scientific writing skill ought to be a must task for any professional teacher in an Information

Communication Technology compliance society to enhance societal individual development. Thus invariably will result to sustainable poverty alleviation as well as achieving major development goals of any given country.

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