

EDUCATION IN THE ERA OF NEW TECHNOLOGIES: ISSUES, CHALLENGES, CONCERNS, AND PANACEAS

**PROFESSOR GANIYU TITILAYO
OLADUNJOYE**



JOSEPH S. ...

EDUCATION IN THE ERA OF NEW
TECHNOLOGIES:

ISSUES, CHALLENGES, CONCERNS AND
PANACEAS

ESSAYS AND STUDIES IN HONOUR OF PROFESSOR
GANIYU TITILAYO OLADUNJOYE

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ADVANCEMENT IN INFORMATION TECHNOLOGY: A CALL FOR ELIMINATION OF SHORTHAND FROM BUSINESS EDUCATION CURRICULUM

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INTRODUCTION

The advancement in information technology has offered new system, potentials and methods of impacting knowledge. This technology has fundamentally altered the way we live and work and how we learn. Information technology is a term used to describe the equipment and software elements that allow an individual to access, retrieve, store, organize, manipulate and present information by electronic means. Information technology (IT) is a concept that is used to describe the strength and divergent uses of computers and telecommunication devices for data information interchange (Nwanewezi, 2013). The emergence of information age has given business education particularly office technology new facilities and progress never before imagined. Oliver, (2011) noted that information technology is a force that has changed many aspects of the way we live. The introduction of information technology is clearly changing the way education is conducted because it paves ways for new teaching methods that demands students to play more active role in order to fully utilize the benefits of information and communication technology (ICT).

CONCEPT OF SHORTHAND

Shorthand, according to Encyclopedia Britannica, is "any system of rapid writing using symbols or shortcuts that can be made quickly to represent letters of the alphabet, words, or phrases. The shorter Oxford English Dictionary describes it as "a method of speed writing by means of the substitution of contractions or arbitrary signs or symbols for letters, words, etc". Other terms used for shorthand are Brachygraphy: short writing (from the Greek word meaning 'short'), Stenography:

narrow writing (from the Greek word meaning 'narrow'), Tachygraphy: swift writing (from the Greek word meaning 'swift').

The characters used in shorthand systems are based on two main approaches. Script or cursive: this system uses letters, signs or symbols derived from normal handwriting or printed forms based on the Roman alphabet. Geometric: this system uses an arbitrary alphabet of signs or characters which may be derived from a geometric pattern such as a circle or ellipse. The signs may be angular or they may follow the slope of normal hand writing.

There are two principal abbreviation approaches in shorthand writing, namely: Orthography: a system that is based on the way words are spelt and Phonography: a system that is based on the way words sound or pronounced. Early shorthand systems tended to use the orthographic approach, but most of the more successful systems from the eighteenth century onwards have used the phonographic approach.

HISTORY OF SHORTHAND

Shorthand formally known as phonography, is an art; a time saving system of writing by sound (Umoru, 2013). Few professions are as old and time-honoured as shorthand reporting, for it is the act of writing which has provided to all civilizations the knowledge of earlier thoughts and utterances. In the evolution of shorthand, Great Britain is rightly the birthplace of the first practical systems. Two inventors stand above all others as the most pivotal in shaping the profession of shorthand reporting – Sir Isaac Pitman and Dr. John Robert Gregg. The shorthand system created by each was based on phonetics, and the functionality of each led to enormous followings. Each endured for decades and demonstrated the ability of users to achieve unparalleled records of speed and accuracy.

Recognition of shorthand's place in Parliament and the courts, formal acknowledgement of the verbatim record, and desire to preserve religious preaching set the stage for widespread acceptance. Increased need for stenographers in the business world resulting from the Industrial Revolution led to large-scale proliferation.

Isaac pitman

1837 sound-hand/phonography

One hundred years after Samuel Taylor, a student of that system set out to design a more functional system, conducive to legibility and rapid writing. In 1837, at age 24, Isaac Pitman's system was published

as Stenographic Sound-Hand. He renamed it Phonography, or Writing by Sound in 1840 after several modifications. It became widely known simply as Pitman Shorthand. In 1852 Brother Benn brought the Pitman shorthand system to America. By 1889, about 97 percent of all US stenographers wrote Pitman and it was adapted to more than 30 other languages, at least 10 in India.

John Robert Gregg

1888 light-line Phonography

Fifty years after Pitman shorthand was announced, in 1888 John Robert Gregg published his system as Light-Line Phonography. This 21-year-old initially insisted that its application was "for business correspondence instead of for the highly specialized work of the shorthand reporter." Gregg brought his system to America in 1893, and renamed it simply Gregg Shorthand. Gregg declared that this more mature version was "rapid enough to reproduce verbatim the fastest oratory." The 1910 Minor Cup shorthand victory of Gregg speed writer Frederick Gurtler gave early credence to this claim.

A system also rooted in phonetics, Gregg Shorthand was easier to write than Phonography because the characters were based on elements of ordinary longhand, versus Pitman's curious shaded geometric characters. Gregg became the predominant shorthand system in America.

PROLIFERATION OF SHORTHAND IN EUROPE

Germany, Italy, and France were at the forefront of shorthand development, lagging only behind England. 16th Century Europeans saw shorthand as a way of spreading the word of God by preserving sermons. In 18th Century England, it was sparked by increased popular demand to read the actual debates of Parliamentary sessions, fuelled by slanted summary newspaper accounts. The worldwide Industrial Revolution created enormous need for stenographers in order to ease the burgeoning paperwork.

Europe had about 3,000 shorthand systems by 1883, including hundreds in the English language. The majority could be taught to the masses, permitting widespread proliferation.

PROLIFERATION OF SHORTHAND IN AMERICA

Pitman's system appeared in America in 1852. Gregg's in 1893. Before then the only known US shorthand system was *A Shorthand*

Book, authored by John Radcliff in 1650. In America, the growth of shorthand consisted mainly of authors perfecting existing systems and users meeting demands of the business, government, and legal communities for their skills. As the Industrial Revolution swept America, the business world needed clerical help to cope with the overwhelming paperwork. The newly invented typewriter also needed operators. Shorthand writers who had the ability to type were therefore in great demand.

According to Holland (1979) a great number of people all over the world, including our dear country Nigeria have used and still using shorthand system at various levels of higher institution and some individuals use it for livelihood. Shorthand therefore, becomes an indispensable tool in the life of a secretary, as he uses it to write minutes in shorthand and dictation from his boss. This research work focuses on pitman system of shorthand. Pitman shorthand uses straight strokes and quarter-circle strokes, in various orientations to represent consonant sounds, the predominant way of indicating vowels is to use light or heavy dots, dashes or other special marks drawn close to the consonant.

FUNDAMENTALS OF SHORTHAND SKILLS

The problem of shorthand is the problem of developing the skills which is basically based on the principles. The great majority of the important points in the more efficient teaching of shorthand arise from a proper appreciation of the fundamental problem, that the teaching of shorthand is the problem of training a skill connected with the ear to co-ordinate itself with a second skill, also to be trained, which is connected with muscles of the fingers and then as a separate function to train a third skills, connected with the eye to read back the results of the other two skills. Holland 1979 declared that shorthand skills acquisition involved the words of-phrases listed below:

1. **Training the ear:** the problem of getting the ear to develop the skills of associating an air bone sound with a particular shorthand skill comes first. How is this skill to be developed? First we must admit that dictation is the essential basis of this part of our function. Clearly, dictation must begin at the very beginning and the words dictated must be those which the students have been taught and therefore the teaching of outlines must immediately precede dictation. This is the justification of preparation before dictation. The longhand exercises in a textbook should be worked by the students not from the exercise book,

- but from the spoken words of the teacher and it must be borne in mind that if you allow your students to work from the printed word, you are developing a skills of the eye in associating the particular either-borne image of a black mark on paper with the shorthand outline, and you are wasting the time of student in a most reprehensible way. It is surely a golden rule in a modern method of teaching. Never allow your students do longhand into shorthand, but make them do plenty of spoken words into shorthand.
2. **Training the fingers:** the next skill to consider is the skills of the fingers. Here the value of copying correct shorthand falls naturally into place. It is again unnecessary to say that this copying should begin with the first lesson and be carried through right to the end. In the early stage it is plain, straightforward copying, you will see that your students have pens with suitable nibs, that the position of the fingers, hand, arm and body are correct, that the outline are written in a good style of shorthand writing, and that they are written as outlines and not as a series of joined strokes. Students must be encouraged to make their pens travel as quickly as the standard of neatness allows and care should be taken to prevent them from drawing their strokes (Russon, 1995).
 3. **Training the eye:** the third skill is the training of the eye in reading. Insists that students should read correctly written shorthand and their own shorthand notes falls naturally into place.
 4. **Hold the pen lightly:** the pen should be held lightly and in such a manner as to permit shorthand characters or outlines to be easily written. The wrist must not be allowed to rest upon the notebook or desk. In order to secure the greatest freedom of movement, the middle of the forearm should rest on the edge of the paper. Paper with a very smooth surface is absolutely essential.
 5. **Repeat the exercise several times:** the students should thoroughly master the explanation and rules which precedes the respective exercises and write out several times the illustrative words appearing in the text, afterwards working the exercise. As the secret of success in shorthand is practice, it is advisable that the various exercises should be written and re-written until they can be done with perfect freedom and accuracy (Holland, 1979).
 6. **Allocation of time:** it should be pointed out that satisfactory progress in acquiring the art of shorthand should only be made if a certain portion of time is regularly devoted to the study of shorthand every day.

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This will give the student the knowledge of shorthand, bringing speed and dexterity.

7. **Drilling/dictation:** this is when some particular strokes or characters seem strange and the shorthand writer would take his time to write the strokes again and again until perfection is reached.

BENEFITS OF SHORTHAND

1. Writing in shorthand is quicker than longhand. Anything that saves time, money and energy is always a bonus. You will become more efficient in taking notes at meetings, lectures and interviews.
2. Shorthand is the only system that can accurately record speech without the use of any electronic recording devices. Think about that for a second. Without computers, shorthand is the only way in the world to write down exactly what somebody is saying without asking them to slow down.
3. People who can write in shorthand have improved job prospects. Put shorthand on your CV or resume as an added skill and many potential employers will look favorably on it. For newspapers it is essential and many managing editors will not hire a candidate who cannot write in shorthand.
4. Shorthand will never run out of battery like a Dictaphone or iPhone. As we mentioned above, shorthand is the only way to write down speech. Pity the poor reporter who misses the quotes from an impromptu press conference because his iPhone battery had died, or it suddenly stopped working.
5. Shorthand secret notes cannot be read by other people! If you make personal notes at home in a diary, or you're in class and don't want another person seeing what you are doing, write in shorthand! Nobody will ever know what it says.
6. Learning shorthand stimulates new parts of the brain, improves dexterity in the hands and fingers, boosts concentrations, improves listening and language skills and makes handwriting a lot neater. These benefits are immeasurable!

TYPES OF SHORTHAND

Pitman Shorthand

Pitman system, developed by Sir Isaac Pitman in 1837. It is based on geometrical curves and lines in varying lengths and angles

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TYPES OF SHORTHAND

Pitman Shorthand

Pitman system, developed by Sir Isaac Pitman in 1837. It is based on geometrical curves and lines in varying lengths and angles

written on lined paper. Lines are also written thin or thick using a special flexible fountain pen tip, though a pencil will work.

The Pitman system is a complete phonetic alphabet, though diacritical marks have to be added alongside the lines to indicate vowels, which is awkward. When speed is important they are often omitted. But since it is possible to write each word that sounds different in a unique way, I consider Pitman's system to be a form of handwriting as well as shorthand. Shorthand is a system of abbreviation in which only a bare outline of a word is written just enough (note the middle line above) to allow you to later decipher from the word's outline and its context what the word is. Shorthand systems go for maximum speed at the expense of readability. Shorthand systems can become readable once you learn to sight read all the outlines or "brief forms," which can number in the thousands, but just learning the basic symbol set won't cut it. The Pitman system is still used, especially in England. It is not easy to learn or become proficient in, but it is fast (up to 10X faster than longhand!), elegantly austere, and has been adapted for use in many languages other than English.

Gregg Shorthand

John Robert Gregg devised the most famous of alternative systems in 1888. All lines are of the same thickness, position relative to a line is irrelevant so lined paper is not needed, and awkward diacritical marks are avoided though not absent. Gregg Shorthand won out over Pitman Shorthand in America, and was widely taught in public schools as an essential skill needed by office workers to take dictation. Many books are available, and most public libraries in America will have copies. Unfortunately, Gregg Shorthand is only a shorthand system; you can only write outlines of words. If you write something and then immediately transcribe it, as secretaries tend to do, then no major problem, but if you try to read something you wrote last year, then a major effort may be needed to decipher it, unless, that is, you have so mastered the system that you can sight read thousands of brief forms.

Although Gregg Shorthand is nominally phonetic, in practice outlines sometimes follow the sound of a word, and sometimes its spelling. Dictionaries are available to show you how to outline tens of thousands of words, but the need for such dictionaries should tell you something of the inherent ambiguities of the system. The system is fast, attractively cursive, but frustrating for personal use since each vowel symbol can represent several possible vowel sounds. It is the exact opposite of

printing alphabetic characters by hand; handwritten text is readable, but blocky and slow to write, while Gregg Shorthand is highly cursive and fast, but only marginally readable.

Teeline Shorthand

Teeline Shorthand is taught to journalism majors in some Commonwealth countries, mainly the UK, but is little known elsewhere. James Hill, an instructor of Pitman Shorthand, developed it in 1970. It is simpler than Pitman Shorthand, without the need to use both thick and thin lines, or diacritical marks. It is not phonetic, but instead is based on the standard alphabet, and so retains the inadequacies of that alphabet. Vowels are often omitted for speed at the expense of readability, as in most shorthand systems. It is intended to aid in taking dictation by creating word outlines, and so needs to be transcribed soon after it is taken. It is, therefore, more suited to professional than personal use.

Alphabetic Shorthand Systems

Various systems of rapid writing based on alphabetic print or longhand characters have been devised. Speedwriting, Stenoscript, Forkner, Easyscript, AlphaHand, Baine's Typed Shorthand, HySpeed Longhand, Abbreviatrix, Quickhand, and Carter Briefhand are examples. Keyscript, a new system based on Pitman's, claims to be the fastest of the Alphabetic systems. Few if any new symbols need to be learned. Most systems consist of rules for abbreviating words together with memorized abbreviations. If the rules are consistently applied, they can be reversed to decode your notes. These systems have the advantage of working with both pen and paper, and with keyboards. Word processing software, such as Word, could possibly be set up to decode and expand words as you type which would allow you to speed type.

Handywrite

Unlike the other systems mentioned, except Pitman's, this is both a handwriting and shorthand system. It contains symbols for all the consonants and vowels needed to write English phonetically, and so when words are written in full, the writing is unambiguously readable. Simple strokes, very much like those in Gregg Shorthand, are used, so the system is cursive and fast. In fact, most of the symbols used for the consonants are the same as used in Gregg Shorthand. The main difference is that enough symbols have been added to represent all necessary vowel sounds. In this it is like Pitman's system, but without

printing alphabetic characters by hand; handwritten text is readable, but blocky and slow to write, while Gregg Shorthand is highly cursive and fast, but only marginally readable.

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dependence on position relative to lines, strokes of different width, or use of diacritical marks.

Alternatives to Shorthand

1. TextExpander: is the communication tool to boost team productivity by cutting the repetitive typing that creeps into every task.
2. aText: accelerates your typing by replacing abbreviations with frequently used phrases you define.
3. Texpan: is a text expansion app that helps you save a lot of time by assigning shortcuts to your frequently used texts
4. Breevy: is a text expander for Windows that helps you type faster and more accurately by allowing you to abbreviate long words
5. CodeExpander: is a smart feature with TextExpander and embraces the GitHub Gist client. It saves and manages text or script.
6. CanRemember: is a canned speech manager, which allows you to quickly access stored procedures.
7. WordExpander: is a free Phrase Expander that provides quick access to your common phrases
8. yType: is a productivity tool to amplify your typing ability.

Objectives of Shorthand

Ejeka, (2015) highlighted the following basic objectives of shorthand.

1. To inculcate in the students the ability to take dictation
2. To enable the students to take dictation with sufficient speed and accuracy so as to produce mailable transcripts
3. To develop in the students the ability to recognize sounds and to record in shorthand the sound heard
4. To help the students develop fluency in writing and in reading shorthand
5. To help the students acquire common business terminologies
6. To enable the students to formulate certain outlines in which straight lines, curved lines, hooks, circles are represented properly as words.
7. To help the students develop the ability to construct new outlines
8. To help the students to improve their knowledge of English spelling and punctuation before transcription is introduced
9. To encourage the development of desirable stenographic traits and habits

10. To enable the students to appreciate the opportunities open to stenographers

With the above objectives, one can see the importance of shorthand and so one should not be quick at accepting the elimination of shorthand from business education curriculum.

Current technological development in business has to do with automation. Technological advancement in business education may be described as many improvement in machines and in the methods of their use and application in business and industry in order to increase productivity and facilitate effective management (Esene, 2004)

The main agent of technological development is the computer. The office is so automated now that there are new facilities like word processor, personal computer, electronic communication, networking, data bases, electronic files, better communication skills and new technical skills needed by industries and businesses. There is general agreement regarding the need for a course which develops understanding of basic or introductory computer concepts, awareness of computer technology and the ability to use recommended instructional language. The desktop computers, mini computers, even tinier ones are now being used by people to store messages and data which are retrieved when needed but in all these, do we remove shorthand from business education curriculum?

Elimination of Shorthand

As the world changes, we should keep changing with what life brings. Now there are so many gadgets, advances are continually metamorphosing our information handling. There are affordable computing and communication products which are becoming available to small businesses as well as large ones, hence the call for elimination of shorthand from the school curriculum based on the following:

1. There are merging of technologies and integration of functions that are providing quality information and communication facilities designed to improve professional and managerial productivity.
2. Only few people seek admission into secretarial studies because of shorthand involved and this has reduced the number of teachers for shorthand and has resulted in loss of interest on both the few teachers in schools and their students.

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3. Shorthand instructions are no more being improved, because of lack of in-service courses, conferences, and seminars/workshops and so should be better forgotten, as there is no more interest rather everybody is pursuing computer literacy.
4. The heavy work load on the few teachers of shorthand has resulted in poor delivery of lessons, students' discouragement and loss of interest and most of them are into computer training at their leisure time
5. Communication, storage, retrieval, control and disposition of information handled by professionals are now machine aided and better produced
6. Deployment of technology-based information tools now promote organizational effectiveness and efficiency.
7. This technological development equipment improves both efficiency and the effectiveness of workers
8. The body of knowledge is so vast now that the school time table can no longer accord sufficient periods to a subject and shorthand being too technical (above just reading and memorizing points) has been discovered based on submission of Nwokolo (2001) to have started dying out because of the following:
 - a. Insufficient drills by teachers due to lack of time
 - b. Poor method of teaching by some of the few remaining shorthand teachers
 - c. Principles of shorthand become progressively difficult
 - d. Shorthand seen as being naturally boring by majority of the students
 - e. Shorthand seen as having too ambiguous objectives
 - f. Students inability to develop speed and cope with outlines
 - g. Insufficient practice by students
 - h. Students problems with transcriptions
 - i. Lack of facilities for learning shorthand
 - j. Forgetting of shorthand easily by students
 - k. Unfriendly atmosphere created while teaching by shorthand teachers
 - l. A record of consistent poor performance of students in shorthand

All these arose from the fact that insufficient time is given to apply various methods of instruction to achieve the purposes for shorthand; therefore, better ways of writing should be applied. Teachers

of shorthand are no longer adequately motivated because emphasis is more on mathematics, English and other subjects and little on business education subjects especially in shorthand generally. The little shorthand learnt now is because it is compulsory for business students at junior secondary school. These have discouraged the learning of shorthand in every aspect of Nigeria education. The teaching method in Nigeria is mainly traditional instead of subject competency-based method, so all students are dragged to move at the same pace, which is discouraging to slow learners who are always dropped behind during the teaching and learning of shorthand.

Computer literacy has much been emphasized even during interviews that students prefer to spend their time on it than taking dictations. Modern handsets for phoning can store as many messages as possible and tape recorders can equally record proceeding and with these, it is emphasized that shorthand be removed from business education curriculum.

Furthermore, the roles of secretaries has being transformed from the traditional roles of taking notes in shorthand and transcribing same on manual typewriters, to storing, retrieving and text-editing information as computers, word processors, electronic typewriters, and computer storage devices such as diskettes and magnetic discs/tapes due to the "mind of change" in business circle in terms of information technology and revolutionizing information system (Esene, 2009).

Retention of Shorthand

Shorthand still remains a very important aspect of stenography and cannot be easily removed with the wave of hand for these reasons:

1. Lack of equipment in schools for technological outfits is still a problem that the removal of shorthand should not be advocated for in the next decade in Nigeria.
2. No speed can parallel shorthand as it takes longer time to press keyboard than to write shorthand outlines
3. Shorthand provides the privacy needed in most records but proliferation of data banks may create problems in confidentiality.
4. Problems of mobility of equipment such as computer and some other gadgets cannot easily be move from one place to another for record keeping but secretary can easily move with pens and papers to take notes whenever there is need.
5. Problem of power supply in Nigeria as constant power failure boils down to finishing the work in shorthand

6. Automated office equipment may cause the people especially secretaries to lose their self-reliance and the ability to cope with emergencies, unexpected pressures and difficult office situation and so on. Therefore, shorthand should be retained especially in Nigeria where we cannot vouch for the adequacy of most of machines and attendant accessories for now.

7. A stenographer remains the type needed in most remote areas where automation is not yet in vogue.

However, shorthand skill is a requirement for advancement in secretarial position and shorthand skill shall continue to be emphasized in the secretarial curriculum, because it is quicker to be applied at workplace than automated efforts.

Limitation of Shorthand

1. Hard to learn: Shorthand writing is not only very hard to learn but it is also time consuming to learn and you might lose your patience even before you start mastering it.
2. Confusing: Sometimes, you will experience confusion with regards to the symbols or characters used so this requires you to familiarize and master the characters so that when the time comes you really need to write fast or translate a shorthand document to English, it would be easier.
3. Slower note-writing: Yes, it is true that you can write notes quickly when you use shorthand writing, but if you have not yet mastered or improved your shorthand writing skills, this advantage may not be applicable for you and you may find shorthand writing to be slower than when you write your usual way.

CONCLUSION

The writers support the view that shorthand should be eliminated because education is in active process and requires active participation of the learners. Since most children prefer to touch computer as against drills and practice requirement in shorthand, then shorthand should give way to automated modes. Also production of teaching aids in shorthand is very difficult except to write out outlines on chalkboards or cardboard sheets but toys and miniature computer games fill the market and can apply when teaching the things that have come on board in technology.

The writers therefore, recommend that all the time and efforts being given to students to achieve those numerous shorthand objectives

which are now difficult to attain, should be allowed for teaching these automated methods but schools should be equipped with adequate facilities and also be ready.

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