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Research Article

Beyond the Translation of Initial Meaning: The Localization of Yorubabound ICT Terminologies

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Research in translation is often centred on issues that bother on literature, language teaching, style, processes, etc. This study examines the translation of Yoruba-bound ICT terminologies beyond their raw meaning as presented by the English language and culture. It deploys localization, the third in the GILT arrangement of Globalization, Internationalization, Localization, and Translation in modern technology translation. The objectives of this study are to: identify certain ICT terminologies in English, describe adoptable strategies for translating the terminologies for Yoruba end-users, examine how the terminologies are understood in the Yoruba locale as intended by the initial meaning, highlight the difficulties involved in the interpretation of the terminologies into Yoruba, propose cultural and linguistic models for translating ICT terminologies from English into the Yoruba language. The study adopts Bell's linguistic and psycholinguistic model (1991) to analyze and synthesize the structural organization of linguistic materials of the ICT terminologies and their translation beyond their surface meaning. The study finds out that: the traditional approach of translating Euro-based terminologies by loanwords may yield little result; localizing ICT terminologies will enhance the appreciation of ICT materials by Yoruba end users; difficulties involved in the interpretation of ICT are both linguistic and cultural, and that ICT terminology translators are technical and cultural mediators. The study concludes that the marketing and purchase of ICT products are likely to be more embraced by Yoruba end users with the use of localized expressions to translate them. It recommends that in the world of GILT, translating beyond the initial meaning of the structure of linguistic materials of the ICT terminologies is a snapshot.

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Introduction

That Information and Communication Technology has become part of human life in all endeavors is stating the obvious. People across the globe access information on any discipline and issue of life using computers. While European languages such as English and French enjoy an elitist audience, restricted languages such as most African languages, Yoruba inclusive, do not. This lacuna has limited the effective use of computers in daily activities to those who are versatile with the use of English and other European languages. Africans such as the Yoruba, who are warmer with their native language, may not appreciate as much as desired the computer registers in English. This may have an effect on the sale and use of computer systems as individuals' companions. The role that technology plays in world commercial activity continues to expand. Tony Hartley, in Jeremy Munday (2009, 106), remarks that "the rapid expansion of the internet has been a major factor in allowing even smaller companies to market and sell their products internationally." Since language is a message carrier of every human activity, accessing internet language in one's *restricted* language is imperative for the global market and connection.

Though the learning of the Yoruba language is becoming a bride as some institutions in Europe and Asia teach it as one of the languages of the world, the use of the language is mainly found among its native speakers in Nigeria, Benin, and Togo. Speakers of the language who are literate only in Yoruba could essentially access information written in the Yoruba language alone. This makes the translation of ICT terminologies written in European languages such as English into Yoruba a very important tool to expand the world market and allow access to internet facilities for human development.

Theoretical Framework

The study adopts Bell's (1991) linguistic and psycholinguistic perspectives to present a model which accounts for phases of analysis and synthesis. The data drawn from general ICT terminologies are translated, empirically analyzed, and culturally accounted for to foreground the approach adopted for translation of the ICT terminologies from English into the Yoruba language. The model advocates for translation in terms of information processing. It requires short-term and long-term memories for the decoding of source language input and the encoding of target language output. It follows a top-down/bottom-up structure. It starts with visual recognition of the words of the source text, then undergoes syntactic parsing in combination with mechanisms of lexical search processed by a psycholinguistic structure of the two languages involved, with the linguistic culture of the target

language in focus. This is followed by semantic and pragmatic processing to generate a semantic representation which leads to the target language correspondence. Although the emphasis of this model is on processing of information at pragmatic, semantic, and lexico-grammatical levels, the Yoruba cultural lodes as determinants of pragmatic interpretation of the ICT terminologies are imbued. The model gives the possibility of revision and changes in previous decisions. In other words, more ICT terminologies could be translated, and the translated ones could be revised if needs be.

Concept of Meaning in Translation

Meaning is central in translation. It is the nucleus of message reproduction. Meaning in translation has been subjected to different treatments by different scholars and theorists of translation. Roman Jakobson (1959/2012) describes the nature of linguistic meaning and equivalence with his three kinds of translation: intralingual, interlingual, and intersemiotic, with interlingual referring to translation between two sign systems or languages. He follows the distinction Saussure (1857-1913) established between langue (the linguistic system) and parole (specific individual utterances). His further differentiation between the signifier and the signified on *langue* seems to affirm the dichotomy between word translation and translation beyond words. While the signifier refers to the spoken and written signal, the signified refers to the concept. Both give us the linguistic sign. The word *table* in English is the acoustic signifier which denotes the concept of wooden or metal materials with four legs made of wood or metal, which is the signified. On Saussure's concept of parole, Jakobson (1959/2012, 127) and the issue of equivalence, Jakobson points out that 'there is ordinarily no full equivalence between the code-units.' To him, it is difficult to have equivalence in translation. This idea seems not to realize the essence of linguistic universalism, which states that while languages may differ in the way they convey meaning and in the surface interpretation of such meaning, there is a shared way of thinking and experiencing issues across all languages of the world. According to Munday (2016, 60), linguistic relativity or determinism, on the other hand, claims that 'differences in languages shape different conceptualizations of the world.' At a cross-linguistic level, meaning equivalence is obtainable by respecting rules of grammar and lexical formation. 'Languages differ essentially in what they must convey and not in what they may convey.' (Jakobson 2012, 61).

The search for meaning and equivalence is hinged on the theme of translatability in translation studies. The works of Nida (1964 & 1969) were laudable. His attempts to move Bible translation into a more scientific era go beyond mere linguistic exercise. His systematic approach draws theoretical concepts and terminology from both semantics and pragmatics. He followed the Kernel key as enunciated by Chomsky. For Nida and Taber (1969, 39), 'Kernels are the basic structural elements out of which language builds its elaborate surface structures.' They are to be derived from the source text surface structure by a reductive process of back transformation. Factors such as events, objects, abstract and relational, all at grammatical levels, are involved in this process. On the nature of meaning at semantic and pragmatic levels, Nida (1964, 33) moves away from the old idea that a word has a fixed meaning to a functional definition of meaning in which a word gets meaning through context and exigencies of culture. This underlies the importance of context for communication while translating metaphor, idioms, and complex cultural items. For Nida, translation can only be adjudged to have produced an equivalent effect when it makes sense, conveys the spirit and manner of the original, has a natural and easy form of expression, and produces a similar response. Gbadegesin (2020, 101) underlines the intention of translation by dynamic equivalence of Nida as follows: " ...la traduction par équivalence veut que le message soit adapté à la culture réceptrice comme une entité." In other words, translation by dynamic equivalence focuses on resolving constraints associated with culture. Adapting ICT terminologies written in English, for example, into the cultural acceptance of the Yoruba end users will not only make the users computerfriendly but also expand the market for the products.

Peter Newmark's communicative translation approach views meaning with respect to semantics and context. To him, "semantic translation attempts to render, as closely as the semantic and syntactic structures of the second language allow, the exact contextual meaning of the original". Language communicates when it is appropriately used in context. Context dictates the direction of syntax and choice of words, which form the gamut of semantics. While semantic translation aligns with Nida's formal equivalence, its form of producing an equivalent effect on its readers leaves out problems of culture translation. This raises questions of equivalence relations in translation.

Werner Koller (1995) examines the concept of equivalence in translation with regards to contrastive linguistics, which compares two language systems and describes differences and similarities in contrast. His approach to equivalence relations in translation relates to equivalent items in specific source texts and target texts, lexical, morphological, and syntactic pairs, and contexts. Meaning is crucial in the translation of ICT terminologies into minority languages, and acceptable cultural and linguistic correspondences are imperative for a good understanding of the technical terms associated with the internet.

Translation and the New Technology

The emergence of new technology, with the complex interaction of humans with the internet, has redirected modern translation practice, translation shifts, and notions of equivalence. With the English language as the *lingua franca* (Hatim 2004, 112) of world trade, globalization of the economy, and the advent of the internet, localization has become a tool for accessing products in all languages of the world in general. Translation has formed part of what software companies around the world refer to as the GILT business. GILT is an acronym for Globalization, Internationalization, Localization, and Translation (Jimènez-Crespo 2013: 24-29). Globalization is the organization of processes of business which consists of management, marketing, and consumer care. The main objective of this is to support internationalization and localization. Internationalization refers to the adaptation of the product to the target locale. We shall explain this further in the next subtopic. Translation is an element of localization that may work on equivalence beyond the routine traditional translation of linguistic substitution. It is a vehicle that drives the essence of the other three in GILT.

Localization of Terminologies of New Technology in Yoruba Language: Beyond the Translation of Initial Meaning

The need of the labour market to fill the Yoruba nation, like any other African nation in the world, with ICT products necessitates a shift from English not only as a language of advertisement but also as a language of internet use. According to the Localization Standards Industry Association 2003 (www.lisa.org),' localization involves taking a product and making it linguistically and culturally appropriate to the target locale (country/region and language) where it will be used and sold. Localization is viewed in different ways by experts in the field of translation of terminologies and industry. While Jimènez Crespo 2013:11 sees it "as the combination of a socio-cultural region and language and a language in industrial setting,' Localization Standards Industry Association 2011 considers it as 'a super ordinate term that encompasses translation.' Whichever way the two thoughts see it, localization is a potential target user of ICT product centred. Since its essence is to make the use of the products available to the end users in their local language, the linguistic and cultural understanding and acceptability of the terminologies are imperative for easy access to the products in the local language. Localization may call for substituting inappropriate cultural symbols in foreign languages with translations in acceptable

cultural and linguistic terms. This may involve a change on the space screen to reflect identification with the local users of the products, adaptation of the size of the screen dialogue boxes, colours, and character sets. Visuals may be replaced with local materials. Dress codes of people may have to conform to the local codes; gests and gesticulation may have to be introduced to illustrate a product.

Milengo (2003) explains four process models in localization as follows: the new software to be translated; the new documentation and Help files; the translation of the previous software release; and the last documentation and Help files that were translated. The difference between localization and translation is in redefining translation from the perspective of language to the overall cultural adaptation of the terminologies to create an acceptable impression on the local users of the ICT products. Computer language needs to be localized as a point of departure. The focal point is making the Yoruba users of computers read, understand, and appreciate its use in their own language and culture. The following translation of the terminologies may not embrace lexical correspondences but should be able to arouse Yoruba users' interest in ICT usage and application. Two issues will be treated in this study: computer components and the operating system.

Computer components and operating systems are the two key issues in domesticating or localizing information and technological terminologies in the Yoruba language. We will look at the components first and localize them before treating the operating system.

Hardware – àpótí èro ayá ra bí àsá

The localization of *hardware as àpótí èro ayá ra bí àsá* distinguishes the computer box from any other types of boxes such as a radio box, television box, etc. The restitution here is translation by explicitation. Here, the computer box, referred to as hardware, is unique in its function. It is to perform an informative function which can be processed within seconds and can travel across the world in a twinkling of an eye. In Yoruba culture, a bird called hawk is reputed for its ability to catch its prey at an unimaginably fastest hit. The comparison of a computer to this kind of bird underlies how the culture sees a computer as the fastest means of passing information with a click.

Software- Àkóónú

This is a translation by referential cultural correspondence. *Àkóónú* is an input kind of device. It refers to information stored or kept inside something or *someone* for retrieval for use in the future. This is analogous to *software* in computer language which refers to the programs and routines that enhance the

user's installation. In other words, it is the program installed to perform specific functions with the computer system. Both software and *àkóónú* depict that something (a program) is created and installed for use at a specific time.

Program – Ètò àtòlé

Literally, the word *program* means *étò* in the Yoruba language. Program in computer language goes beyond *étò* in the Yoruba language. It is a set of instructions arranged in a logical order for performance. The arrangement provokes the addition of the adjective *àtòlé* in the line of entropy in the translation. This gives a Yoruba user of the device a deeper understanding of what the term connotes in ICT in his/her language.

Instruction – atónà

A Dictionary of the Yoruba Language (2012) gives as translation of the word *instruction*, the following: èkó, ìmo, àse which in other words can imply: education, knowledge and command or order respectively. Literally in English, *instruction* refers to detailed information on how to do or use something (*Oxford Advanced Learner's Dictionary,* 8th edition, 2015.779) It is a direction on what to do or use. Both Yoruba bilingual dictionary and the Oxford Advanced Learner's Dictionary hardly help in interpreting the computer meaning of the word *instruction*. Since it is not talking of signals to follow but a dictate of an action to be carried out, it is *atónà* (a guide) and not *ìlànà* (the rule) as one may wish to suggest as the initial meaning of the word. This effort can be referred to as referable transfer of meaning in translation.

Command – *ìpaláse*

Though the word *command* means an order (*àse*) which must be obeyed, in ICT parlance, it is not the system that gives an order; rather, it is what the system is asked to do. It is under the user's control and not the other way around. At times there may be a role reversal. By this, a suggestion by the system for the user to make it carry out a specific function may be initiated. In this case, if it is the user's wish to continue with the search, he clicks and continues. If not, he can opt out. **Àse** of *command* is autocratic, and the receiver dares not disobey it or opt out of it without grave consequences. *ìpaláse* suggested for computer language: *command* as its Yoruba translation here gives room for this reversal function of order for both the system and the user. Thus, its localization should enable the Yoruba user of the product to manipulate the system when he is to apply the terminology in surfing through the internet.

Compiler – àká àrokò

Literally, a compiler can be a *collator*. In ICT terminology, it connotes a program development software which translates programs written in high-level language into its machine code equivalent and stores them before execution of the codes generated. In other words, it is the storage of software development in special codes recognizable by a machine before execution. The codes are signs which may not be in the form of letters. In this case, it is *àrokò*. It is intersemiotic in nature. Since it is in storage in the system for the user's execution, it is in *àká* (record/archive) from which it can be drawn out when needed for usage. It may not necessarily be the *àká* of archival materials reserved for historical purposes. It is mainly a machine code for ICT manipulation.

Interpreter – atúmò àkóónú

Ordinarily, the word *interpreter* is a translator of oral communication between two languages. An interpreter in the Yoruba language is referred to as *ongbufo*. He is someone that decodes what is spoken in one language and renders the same orally in another language, whether simultaneously or consecutively. *Interpreter* in ICT terminology explains program development software which translates a program written in a high-level language into its machine code equivalent and executes it before taking another line. It is *atúmo*, an explainer of software (atúmo àkóónú). This is a dynamic restitution of terms that takes into account the culture and language of the specialized word.

Assembler – létà arópò òrò sí ààmì èro

Assembler is a device that brings things together or a person that assembles parts of a machine (alátòpò). In the ICT register, it refers to program development software which translates a program written in mnemonic symbols and assembly language program into their machine code equivalent. It is not *alátòpò* (something that relates to material assemblage or something that piles up things). It is a representation of codes with their abbreviations. Here, the translation by explicitation is adopted to translate the word *assembler* as *létà arópò òrò sí ààmì èro*.

High-level language – èdè èro ayára bíi àsa tí ó súnmó òye ènìyàn ju ti èro náà lo

In a communicative chart, six levels of language may be identified: oratory, poetic, elevated, median/standard, popular, and argotic levels. Oratory, poetic, and elevated levels are the three high levels of language in any communication. However, in ICT, high-level languages refer to computer

programming languages. Humans have a closer understanding of these languages than the machine does. This makes human translation an important factor in machine translation for a clearer understanding of the audience.

Low-level language – èdè èro ayára bíi àsa tí ó súnmó òye èro ju ti ènìyàn lo

Popular and argotic levels of language are often seen as the two low levels of language in communication. However, since low-level language in ICT terminology refers to programming languages that machines understand better than humans, the translation cannot be otherwise. The contextual reproduction of this term in Yoruba is necessitated by the fact that a lexical rendition will not achieve the desired translation product.

Operating system – amúnimònà,

An operating system refers to a set of routines (programs) that directs the operation of the computer with a set of instructions for a particular process. It does not connote starting and manipulating a system but rather the program of operation. Consequently, *ònà àá gbàá seé*. (Operation mode) will not interpret the spirit of the term: *operating system*. Since it is a program that connotes an operational guide, the suggested term *amúnimònà* should be adequate as an equivalent of the *operating system*. This can be considered as translation by material function.

There are more basic facts about ICT which a Yoruba-bound end user needs to understand in his language. We can consider as follows:

Data – àwon àkosílè tí akó wo inú èro

Data are facts collected from certain sources to find out things or make decisions on certain things. They constitute sources of information from which findings are made to execute certain projects or works of art. Data, in the ICT sense, refers to basic facts and figures which go into a processing input. This may include the name, date of birth, qualifications, etc., of an employee. They are inputs that make the work of a computer user easy in sorting out information about an organization or individual. The Yoruba are used to record keeping, which they refer to as *àkosílè*. This **àkosílè** in the past could only be found in books. This accounts for the translation of the ICT word *data* as not just what is written down, but an input in the computer system which may give it more permanence, from which anyone around the globe can draw information. It is a specified kind of information – the one that is put in electronic form. This

translation by explicit transfer is occasioned by the fact that sense must be a driven force in the meaning transfer of any translation.

Process – *ìqbésè ìsirò*

In the daily usage of the word, a *process* refers to a series of things that are done so as to achieve a particular result. In ICT terminology, a process is a manipulative activity carried out on data. Examples of such are arithmetical works. Here the word *process* does not imply *procedure* or *step* to take in doing something, but a computational work carried out on data. The computational work is a key phrase in process description, and that is equally the key to getting the meaning of the word in Yoruba beyond the initial meaning. *Isiro*, as equivalent to computation, may not be adequate without the sense of manipulation. This accounts for the use of *ìqbésè* as the noun that takes *ìsirò* as a qualifier.

Information (output) – àtèjáde (isé àkóónú)

Information refers to facts or details about something or someone. It is giving an account about something, which in the Yoruba language will be interpreted as *ifitónilétí* or *iròyìn*. In an ICT register, the words *ifitónilétí* and *iròyìn* would not translate the term *information* as it refers to an output generated from data processing systems. This explains the choice of *àtèjáde isé àkóónú* as the translation of *information*. It is the output of the stored data.

Download – èdà

The word *download* seems to be a peculiar term in ICT devices. This may be a bit strange to a typical Yoruba man who is not conversant with computer language. He may wander between the words *load* and *offload*, which have to do with the transportation of goods and passengers. Documents scanned and stored for future reference or turned to hard copy while the original remains intact on the internet can be referred to as downloads. In Yoruba culture and language, such a material is referred to as *èdà* (a copy) of the original document. This should give a clearer understanding of what *download* connotes in the Yoruba language.

Upload – àkósáféfé

In Information and Communication Technology terminology, *upload* refers to documents usually typed or designed and placed on the internet for accessibility. Since it has to do with the internet, popularly known as *ayelujara* in the Yoruba language (a system that has made the whole world one source of much information) and which is believed to be in the air (*áféfé*), uploading to a site or a particular address on the internet is uploading in the air. The suggested equivalent, *àkósáféfé*, as *áféfé* refers to the air, should translate *upload* in ICT parlance in the Yoruba language.

It is needful to give Yoruba equivalents of certain components of a computer to enhance its usage by potential Yoruba users who may not be versatile in the use of English. We will consider some of these as follows.

Monitor – àpótí àwòrán

The use of television is popular across the world. It is interpreted in Yoruba by borrowing as *telifísàn*, but the actual Yoruba equivalent meaning is *móhùnmáwòrán* (audio-visual). The central role of a monitor, though it looks like a television, is to display the accepted data and information produced after processing by the computer. It is the computer screen. It is a visual display unit, and so the box is essentially for watching what is displayed. It is *àpótí àwòrán* and not *atopinpin* (monitor). *Atopinpin* means something or someone that inquires into something or someone's activities or delves into the action of someone or something. This may be far from the functional meaning of the term, as the word refers to a *display box*. Another term we would like to consider is keyboard.

Keyboard – Opón ìmò

Yoruba culture is used to a game of wood with twelve cup-like holes hewn, six in each side. This game is popularly referred to as *ayò*, and the hewn wood is referred to as *opón ayò*. Another type of *opón* that typical Yoruba are conversant with is *opón ifá*. Ifá is a deity in Yoruba land. It is a god of divination. *Opón ifá* is a flat hewn wood in which *iye* (a flour-like object) is spread for *ikin* (palm nuts) to be used to chant *odú* that appears with panegyrics to divine the course of man. The keyboard fairly resembles these two types of *opón*. The difference is that the keyboard has multiple keys with different functions. The two types of *opón* can only be used and interpreted by experts and diviners. In a computer register, the keyboard does not refer to the organ used in music; rather, it is an input device where data can be entered into a computer with function keys. As letter tabs on the keyboard input data by tabbing as *opón ifá* in divination and counting in *opón ayò* to gain knowledge of counting and manipulation, the computer keyboard helps in typing what one intends to research into. The cultural knowledge of the roles *opón ifá* and *opón ayò* play in gaining knowledge about something should make *opón imò* (a device for knowledge) a correspondence to *keyboard* in the Yoruba language.

Tab – fi alafo sile

The function of the tab key is to jump a space or spaces to the right. It is not the short form of tablet or drugs that people who are not conversant with ICT are accustomed to. The proposed phrase **fi àlàfo sílè**, as equivalent of **Tab**, is explanatory of the function of the tab key. The user, when s/he tabs, will leave a gap or gaps between one unit of word and another. The user of the system in the Yoruba language should not have any difficulty in understanding what to do with the tab key as he types and surfs on the internet with the translation.

Backspace – Paáré lá tèyìn

Backspace does not imply a hole at the back, neither is it a gap in the ribs. The key is for erasing a character each to the left position of the cursor. In Yoruba orthography, the language is written from left to right. Any erasure from the left is from the back of the letter or character. Hence the phrase: *paáré lá tèyìn*, which clearly states what the *backspace* key does in computer terminology. The hidden context of the use of *backspace* is made clear in this translation by explicitation.

Capslock – Soó di létà nlá tàbí kékeré

Capslock is a single word. It does not refer to any lock. It simply means in computer language that when we press ON on capslock, it turns the characters (alphabets) to upper case. They are turned to lower case when OFF is pressed. This tells users how to change from block letters to small letters and vice versa as they may wish (**soó di létà nlá tàbí kékeré**). The suggested phrase as a translation of the term clearly directs the users on what to do with the capslock key.

Adapting ICT terminologies written in the English language into the Yoruba language is imperative. This is because a high number of the people who use mobile phones can only make calls, access Facebook, and WhatsApp. They get to a crossroad whenever they have to surf on the internet to research into various fields of human endeavour that can be of high benefit to them. Lack of proper understanding of the function of each computer key is a major impending factor. Since most of the people in cities and villages across the nation (Yoruba nation) are literate in the Yoruba language, having the function keys and terminologies in their native language should be a significant breakthrough in the localization process of ICT usage.

Conclusion

Developing a terminological glossary for ICT in the Yoruba meta-language is an obligation and not a choice if computer use, whether via mobile phone, desktop, or laptop, will be a means of making all nations a true global village. Specialized source texts such as ICT imbue are necessary tools of reflection in translation. The need for intertextual relation between ICT terminologies written in English and their conceptual equivalents in Yoruba is both linguistic creativity and cultural exigencies.

The polysemy and synonymy of Yoruba terms proposed in this article establish complex relations that exist between forms and meanings in technical translation. Phraseological contexts observable in the terminological variants of the Yoruba language attest to the perspectivising role that localization of the terminologies plays in the economic life of the people when adopted. In other words, Yoruba equivalents of the ICT terminologies are co-referential to the source language terminologies. The notion of variation in correspondences led to a descriptive approach for terminological representation adopted for the target language.

The unit of understanding of the use and function of each terminology allows for the prototype of the structure of the translation of ICT terminology in this article from English to Yoruba. The fuzziness and different forms of lexicalization of the terms help in the clustering of terminological variants that refer to the same unit of understanding. The efforts in this study may help in developing ICT terminologies in Yoruba dictionaries and the Yoruba meta-language. The reconstruction of some lexical chains, as could be observed in some of the items translated, gives the users of technological devices units of understanding and appreciation.

Culture is central in localizing technological terms. This is because language, as the vehicle of culture, cannot be dissociated from the thinking and appreciation of linguistic elements of any sort in any way by the users. From units of understanding to identifying the co-referential status of products of translation, the translators bear the cultural acceptability of the terms advanced for translation in mind. The presentation of English terms for ICT terminologies in Yoruba gives an overview of finding possible terms and variants in the source language to the target one.

Since localization evokes adapting a product to the linguistic and cultural expectations of the target locale, the translation of the terminologies put forward in this study could be developed into software, thereby expanding the field of terminological translation in the languages involved and extending the benefits of computer usage to the Yoruba world. Further research is advocated in this direction for more translation of the terms in this regard into the Yoruba language.

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