

Science and Technology as Site for Language Contact: Experience from the Linguistic Style of the Non-Formal Motor Mechanics in the South-western Nigeria

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Abstract

This paper explores literacy issues and lexical development arising from the contact between English as Second Language (ESL/L2) and Yoruba as Mother Tongue (YMT/L1) in the non-formal setting of science and technology (ST) in the south-western part of Nigeria. The paper conducts a study of the language of parts of automobile as they are known by the road-side motor mechanics, the literacy level of the mechanics, and the relationship between these two and their technical skills. By administering questionnaires to thirty-eight (38) auto-technicians, the paper further explores the linguistic and technological implications of all these to improved professional performance by these mechanics on the one hand, and the development of indigenous science and technology on the other. This paper concludes that rather than neglecting them they may well represent a significant instrument of attaining self reliance in indigenous ST development in Nigeria.

Keywords: English as Second Language (ESL/L2), Yoruba as Mother Tongue (YMT/L1), Stylistics, Language contact, science and technology (ST), phonological interference.

Introduction

In the quest towards scientific and technological development in Nigeria, there is the need to incorporate all such individuals and group of individuals who may have one or two crucial contributions to make to the overall fruitfulness of the endeavour. One of such groups of people is the technicians, the road-side technician who, for one reason or the other, did not have the opportunity to attend to have tertiary education. We need technicians to take care our technology. But they appear to be constrained by one difficulty or the other which might not allow them to perform optimally as they would have loved to. More often than not, technicians or mechanics give reliable advice on when best to change the engine oil of vehicles, why tyres need to be deflated or inflated, advantage of automatic gear or engine over manual or vice versa, or that of front wheel vehicle over that with back axle, etc. According to Aliu (2008), 'scheduled or routine maintenance and repairs are required for optimal performance (of engineering equipment or infrastructures) and for adequate life span. Any time these are disregarded or substandard materials are used, low performance or breakdown results' (2008:2). He further argues: 'lack of adequate maintenance leads to faulty operation and indeed breakdowns of systems. For example, if a person does not service his or her car as recommended by the manufacturer, then he or she cannot expect optimal performance. The results are huge economic losses and loss of lives due to accidents' (2008: 3).

Nigeria's engineering equipment and Infrastructural technology cannot run without the input of these technicians. This is because both the engineer and the technologist do not maintain, neither do they repair engines. The technicians do. As it is today, what is the level of their (technicians) input to technological development? What is their level of educational and professional preparedness in order to be useful in, and equally support this quest for technological self-reliance? Where they are found wanting, in what ways can we equip them to enhance their knowledge base, professional confidence, and innovative skills?

There can be no space in this single paper to provide answers to all of these very crucial questions, but they form the bulk of the questions that this paper is prepared to critically address, with special reference to the road-side motor mechanics, and to the linguistic outcome of the contact that ensues between Yoruba as the L1 of the mechanics, and English, an L2, which is the language in which science and technology was received.

In these days of globalization, the major indicator of development of a country, proclaims (Adeniyi, 2006:3), is no longer based on its endowment with material and human resources, but is rather based on ‘the available pool of knowledge and its application for deliverables in terms of goods, packages, processes or services’ be it in the economic, social or political domain. This is because it is mostly with the aid of such knowledge that jobs and wealth can be created, poverty can be reduced, and global competitiveness can be enhanced (2006, p.4). In another document, Adeniyi and Aletor (2005:4) emphasize that ‘rapid advances in economic and over-all Human Development Index (HDI) have become knowledge-based, private- sector-led, science and technology-driven and mainly government facilitated via appropriate policy instruments.’ In the more advanced countries, according to Adeniyi (2006),

Industrial innovations at their tertiary institutions are accorded as much importance as teaching, research and community service. There is an acute awareness among higher education institution (including polytechnics) in these countries of the needs to be more responsive to the increasing pressures of economic globalization as well as needs of industry and commerce (emphasis mine) (Adeniyi, 2006:5).

These responses, which according to him ‘have worked and are still working for the attainment of technological self-sufficiency for the societies that have adopted them for their higher educational system’ are according to Mangwat (2005), in form of the following: (a.) training more graduates to support the development of an increasing knowledge-based economy, both in organization and as entrepreneurs; (b) a higher and further education system that is fashioned towards life-long learning such that the workforce skills can meet the changing demands of globalization; (c) the pursuit of cutting-edge or top-flight research which target commercial applications; and (d) an expanding pool of educated people who can participate creatively in policy discourses and respond to pressing socio-economic and political challenges such as prevalent in developing countries including Nigeria (emphasis mine).

In Nigeria’s search for technological advancement, we must ask relevant questions about this important segment of ST development. What is the role of the road-side technicians in our society? How are they trained? Have they any significant role to play in our quest for indigenous ST development? If they have, how well are they playing such roles? If yes, how can they be assisted? What is their literacy level, and how can such be enhanced if found low? Do they have access to modern sources of technical information? Do they have access to new methods of automobile maintenance and repairs? If no, why?

The Engineer, the Technologist and the Technician

To most academic minds, the relationship between an engineer, a technologist and a technician is all about the certificate each of them holds (university degree especially Bsc, Higher National Diploma, Ordinary National Diploma), which makes one the boss of the other, and not really about the place and the crucial and critical role each plays in the industrial and production cycle. The 7th edition of the Advanced Learner’s Dictionary of

Current English (2005) defines 'Engineering' as 'the activity of applying scientific knowledge to the design, building and control of machines, roads, bridges, electrical equipment, etc.'; it defines 'technology' as 'scientific knowledge used in practical ways in industry, for example in designing new machines' and a technologist simply as 'an expert in technology'. It defines the term 'technical' as 'connected with the practical use of machinery, methods, etc., in science and industry; while a 'technician' is described as 'a person whose job is keeping a particular type of equipment or machinery in good condition; a person who is very skilled at the technical aspects of an art, a sport, etc.'

The Pearson's Longman Dictionary of Contemporary English (Updated Edition) (2005) defines 'Engineering' as 'the work involved in designing and building roads, bridges, machines etc; it defines 'technology' as 'new machines, equipment, and ways of doing things that are based on modern knowledge about science and computer'; while it defines a 'technician' as 'someone whose job is to check equipment or machines and make sure that they are working properly' and the term 'technical' as 'connected with knowledge of how machines work'.

The Pearson's Longman Dictionary of Contemporary English (Updated edition) (2005) defines 'a mechanic' as 'someone who is skilled at repairing motor vehicles and machinery', while the Pocket Oxford Dictionary (1994) defines it as 'person skilled in using or repairing machinery'. A road-side mechanic is therefore a skilled technician, OND or no OND.

In sum, the role relationship of one to the other is that while the engineer designs, the technologist applies and implements, and the technician maintains and repairs, each to his/her own crucial task. In other words, one needs the other to perform. They are thus woven together in a crucial ball of complementarity: one supports the other to function effectively and to have a final product. But do they see one another in this light in Nigeria? What do we then think of the road-side technicians who maintain our motor vehicles, repair our electronics, electrical appliances, etc.? Can we do what they do, that is, repair our vehicles ourselves? If the answer is 'no', then, we must direct our research searchlight on them, analyse their situation, see if they have any role to play in the society, see how they can play it better, and then equip them to do it better. This is what this paper sets out to do from the linguistic point of view of their situation.

English for Science and Technology (EST)

English for Science and Technology (EST) is an aspect of English for Specific Purposes (ESP). Louis Trimble, the father of EST, used it initially to mean 'the written discourse of scientific and technical English'; but was later broadened in scope to refer to 'the field of science and technology' including 'oral as well as written discourse' (Trimble, 1990:2). Trimble describes beautifully the distinction and relationship between the two subsidiaries of ESP, namely, English for academic purposes (EAP) and English for Occupational Purposes (EOP) as follows:

An electronics engineer and skilled electronics technician, for example, have a good deal of the same technical language in common and may rely on the same service manuals for much of their work in the laboratory. At the same time there will be many discourse units they do not share-the engineer will make use of theoretically-oriented texts often heavily laced with quite abstruse mathematics, while the technician will have no reason to consult these types of texts. Further, the engineer will read journals that are of interest to him but would not be to most technicians.

Similarly, the technician will often deal with manual of little interest or use to the engineer. Whatever the differences between those operating at either end of the spectrum, neither end is 'better'; each simply represent written EST discourse with some (but hardly a!!!) different characteristics. Such differences exist in most scientific and technical fields.... In sum, EST covers the areas of English written for academic and professional purposes and of English written for occupational (and vocational) purposes, including the often informally written discourse found in trade journals and in scientific and technical materials written for the layman (Trimble, 1990: 5-7).

It is therefore the job of a linguist in this language area to study the language of science and technology (ST) practitioners so as to analyze, understand and describe their language use for the purpose of identifying features and peculiarities, language difficulties, and with a view to suggesting solutions to such where available.

Language and Stylistics

In simple terms, style is conceived to refer to some or all of the language habits of one person or a group of persons. Further simply, stylistics, or register analysis, is the deliberate investigation of language according to use, and not according to user (Hudson, 1996:45), which may examine appropriateness of usage in relation to situation of use. Lawal (2003) posits that stylistics as a branch of linguistics derives largely from a sociolinguistic interest in the treatment of variables in entire texts that are viewed as communicative events (2003:26). Thus, stylistics is mainly concerned with 'language variation and the distinctiveness of features within and across texts as occasioned by situational factors'. He identifies six distinctive levels of linguistic analysis in stylistic studies, namely the graphological, the phonological and phonetic, the lexico-semantic, the morphological, the syntactic and then the discursal levels (Lawal, 2003: 29).

Aside from this, another approach in stylistic study which according to Lawal (2003) 'aims at a more objective description of the relative frequencies of stylistic features in a text or a group of related texts' is the approach that investigates the idiosyncratic form or style of language use, itself an aspect of sociolinguistics, a branch of linguistics which studies language use in the society. An aspect of this approach is forensic stylistics which tends to involve a more or less quantitative determination of the distinctive style of a writer or a group of writers. According to Dare (1991), this approach, which has been commonly used to determine authorship, is based on the realization that no conscious writer uses a significant linguistic item, or portrays a linguistic feature, repeatedly, without a reason. Lawal (2003:33) thus argues that 'the frequency of occurrence of each stylistics feature can be computed to make more reliable descriptive and explanatory statement of a more general nature'.

The aim of stylistics therefore is the establishment of norms and degree of probability of occurrence of linguistic features (Goatly, 1993), thus equating stylistics with such discourse studies as description of varieties or register analysis (Olajide, 2003: 94). In sum, it is possible to investigate the style of a single text or a combination of texts or language samples having certain level of contextual, periodic, cultural, historical, or authorial relatedness in language use. Finally, according to Olajide (2003):

the highest goal of the stylistician should be to move from formal description of styles to a rhetorical interpretation of texts. The movement is possible because the written

text has a linguistic and social status which can allow the stylistician (to) investigate the text at the intended level (2003:94).

Continuing Engineering Education

Continuing Engineering Education (CEE) as practised in advanced countries in Europe, Britain, Japan and USA, is a means of:

improving the engineering knowledge of those in the engineering profession for higher performance.... Updating the engineering knowledge... not only helps in the production of well trained engineering personnel but also helps in the individual so affected to attain full personal development' (Iwuoha, 1998:391).

This kind of a programme is meant to address the identified shortcomings in engineering education such as 'insufficient teaching of students in synthesis of technology' as well as 'inadequate encouragement to the development of wider skills and outlet required of engineers within the engineering dimensions' (Iwuoha, 1998:392).

The CEE programme involves the engineers, the technologists and the technicians in addition to the engineering managers, who may never have had any engineering training, as the CEE would afford participants 'the opportunity to correct the deficiencies inherent in their initial professional training (Iwuoha, 1998:392). Apart from institutions and professional societies, this programme is also conducted by industries (e.g. UAC) and government agencies or parastatals as in-house and out-house on the job training programmes for their personnel. Limitations to this in-house training is that it is meant only for their own personnel and one set of people in the establishment, and does not usually address the general technological development of the country (Iwuoha, 1998:393). The CEE programme can effectively take care of the training needs of all manners of engineers, technologists, and technicians, road-side automobile mechanics inclusive.

Method of Data Collection

A short questionnaire was prepared to elicit specific piece of information from road-side mechanics in South-western Nigeria. Although at the end, copies of the questionnaire only reached most cities in Osun State, two cities in Oyo State and only one respondent in Lagos State, these three states out of the five states of the south-western part of Nigeria are representative of what obtains in most parts of the region. At the end, thirty-eight (38) copies of the questionnaire were returned completed.

The questionnaire was accompanied by further oral discussions especially where the respondent was willing to talk. The questions cover such areas as academic qualification, age, why they did not go further in their academics or formal schools (not education which could be formal or otherwise), years of experience as mechanic, and whether they are willing to undergo trainings and workshops if such are organized for them. They were finally requested to write out some parts of motor vehicle as they know them, in their own handwriting, especially if they need to 're-born' (i.e. make new) an aged engine. Of course the purpose of the questions was explained to them so as to secure their cooperation and support. This nature of the questionnaire, which requires respondents to write in their own handwriting under supervision, is another important factor why more respondents could not be reached across the region as this was time consuming and expensive. The responses were categorized and analysed as table 1, 2a to 2e, and 3, below. Further clarifications were sought from colleagues in the science and technology disciplines on aspects where such were needed.

FINDINGS**TABLE 1: Respondents' data from across Osun, Oyo and Lagos States in South-western Nigeria**

S/ N	Workshop Location	Qualification	Age	Experience	Reason for Dropping out of School	Interested in training/ workshop s
1.	Ede	JSS 1	30yrs	5yrs	No Financial support	Yes
2.	Ede	JSS 2	25yrs	6 months	No Financial support	Yes
3.	Ede	JSS 2	44yrs	23yrs	No Financial support	Yes
4.	Ede	Pry 6	30yrs	13yrs	No Financial support	No
5.	Ede	Pry 6	50yrs	35yrs	No Financial support	Yes
6.	Ede	Pry 6	35yrs	17yrs	Low assimilation	Yes
7.	Ede	Pry 6	54yrs	24yrs	Not disclosed	Yes
8.	Ede	Pry 6	35yrs	20yrs	No Financial support	Yes
9.	Ede	Pry 6	50yrs	31yrs	Interest in mechanic	Yes
10.	Ede	Pry 6	22yrs	12yrs	No Financial support	Yes
11.	Ede	Pry 6	32yrs	10yr	No Financial support	Yes
12.	Ede	Pry 6	25yrs	10yrs	Interest in mechanic	Yes
13.	Ede	Pry 6	41yrs	13yrs	Interest in mechanic	Yes
14.	Ede	Pry 6	35yrs	8yrs	Low assimilation	Yes
15.	Ede	Pry 6	47yrs	25yrs	Low assimilation	Yes
16.	Ede	SSCE	42yrs	18yrs	No Financial support	Yes
17.	Ede	SSCE	29yrs	14yrs	No interest in School	Yes
18.	Ede	SSCE	37yrs	15yrs	No Financial support	Yes
19.	Ede	SSCE	35yrs	11yrs	Not disclosed	Yes
20.	Ede	SSCE	43yrs	27yrs	No Financial support	Yes
21.	Ejigbo	Pry 6	35yrs	15yrs	Divination	Yes
22.	Ibadan	OND	42yrs	15yrs	His father's job	Yes
23.	Ibadan	Pry 6	32yrs	15yrs	Personal choice	Yes
24.	Ibadan	SSCE	22yrs	2yrs	No Financial support	Yes
25.	Ibadan	SSS3 Drop out	17yrs	2yrs	No parents, no sponsor	Yes
26.	Ikire	Pry 6	36yrs	25yrs	No Financial support	Yes
27.	Ikirun	Pry 6	42yrs	20yrs	Interest in mechanic	Yes
28.	Ile-Ife	Pry 6	35yrs	11yrs	Love for petrol smell	Yes
29.	Ile-Ife	SSCE	38yrs	10yrs	Low assimilation	Yes
30.	Ilesha	JSS 3	27yrs	18yrs	Low assimilation	Yes
31.	Lagos	Pry 6	40yrs	20yrs	No Financial support	Yes
32.	Ogbomoso	Pry 6	35yrs	13yrs	No Financial support	Yes
33.	Osogbo	JSS	33yrs	18yrs	Could not cope	Yes
34.	Osogbo	JSS2	27yrs	8yrs	Could not cope	Yes
35.	Osogbo	Pry 6	32yrs	15yrs	No Financial support	Yes
36.	Osogbo	Pry 6	40yrs	20yrs	No Financial support	Yes
37.	Osogbo	SSCE	32yrs	10yrs	No Financial support	Yes
38.	Osogbo	Standard 6	58yrs	35yrs	No Financial support	Yes

TABLE 2: Summary of Data from the 38 Respondents in Table 1 above**Table 2A: LOCATION**

Ede	Ejigbo	Ibadan	Ikire	Ikirun	Ife	Ilesha	Lagos	Ogbomoso	Osogbo
20	01	04	01	01	02	01	01	01	06

Table 2B: REASONS FOR DROPPING OUT OF THE FORMAL SCHOOL SYSTEM

Not Disclosed		No Financial Support		Interest in Mechanic		Low assimilation		No interest in Schooling		Divination	
02	05.26%	20	52.63%	07	18.42%	07	18.42%	01	02.63%	01	02.63%

Table 2C: ACADEMIC QUALIFICATION

PRIMARY 6		JSS 1 – JSS 3		SSS – SSCE		OND	
22	57.89%	06	15.78%	09	23.68%	01	2.63%

TABLE 2D: AGE BRACKET

17 – 19yrs		20 – 29yrs		30 – 39yrs		40 – 49yrs		50yrs & above	
01	02.63%	07	18.42%	17	44.73%	09	26.67%	04	10.52%

Table 2E: TRAINING

YES		NO	
37	97.36%	01	02.63%

TABLE 3: List of Automobile Parts Spellings collected from Road-Side Mechanics in South-western Nigeria

SN	MECHANICS' SPELLINGS	STANDARD SPELLING
1	Ajosita seni /Ajosita /Chain Arjoster /Ajota	Adjuster chain
2	Andi break	Hand break
3	Asofa /ansofa	Shock absorber
4	Buloku ejin /biloku /bulok	Engine block
5	Busin /busi /bus /pusin	Bushing
6	Bootu	Bolt
7	Bakasu /back asul	Back axle
8	Caprator /cabirato /kaperetor /capretor	Carburettor
9	Chine /seni /saini /sheini /tamisene /timeing cani /time sane	Chain / Timing chain
10	Corodu /corondu /konrodu /conrod /korodu	Cone rod
11	Danba /danpa /dapa /daunpa cani	Damper
12	Esust pipa	Exhaust pipe / silencer
13	Engen oil /ejin oil	Engine oil
14	Fue fita	Fuel filter
15	Ferbu /verb /fabu	Valve

16	Fue pompu /fuel pompu /fueli popu	Fuel pump
18	Fan beti	Fan belt
19	Firan wili /fira wili	Front wheel
20	Gomu /gom	Gum
21	Geji oil	Oil guage
22	Gudon pi	Gudgeon pin
23	Ignisan /igilision /igileson	Ignition
24	Jia siti /gia	Gear seat
25	Jasiketi	Gasket
26	Kii saft	Key shaft
27	Kokodi	Back axle
28	Konu fafu	Cone valve
29	Komplit pakin /kopiliti pakni /kopiliti pakin	Complete packing
30	Ki wosa /kiros wosa /kii wosa	Key washer
31	Koneshon rodu /kollesan rodin /kolesan rodu /conleting rord	Connecting rod
33	Koili	Coil
34	Kuli	Pulley
35	Kountaseti /contat sett /corter set /kotaseti	Contact set
36	Kiransafuti /cran safti /safut /saft /kirahun shafti	Crank shaft
37	Kondensa	Condenser
38	Leda kilosi	Leather clutch
39	Misaft bus /mi saft	Mild shaft / bushing
40	Melifomu	Manifold
41	Metali /meta	Metal
42	Ornu	Horn
43	Oobu /obu	Hub
44	Oil filter /oli fita /oili fita	Oil filter
45	Otanetto	Alternator
46	Oil pomp /oili pompu /oil popu	Oil pump
48	Pulogi /pilog /plogi /pulog /plok	Plug
49	Pisitini /pinstin /pisting /pesitni	Piston
50	Pakin ringi	Packing ring
51	Popeler/ popela/ puro pela	Propeller
52	Roka fafu/ fuku fabu /foka ferbu /roka fabu	Hook valve
53	Radileto /ragilato /ragleto	Radiator
54	Ritena	Retainer
55	Ringi /ringin /rigi /rigni	Ring
56	Silinda /slinda /cilinda	Cylinder
57	Sok an sofa /asofa /ansofa	Shock absorber
58	Salesa	Silencer
59	Saunpepa	Sandpaper
60	Sari boks	Steering box
61	Safo	Servo
62	Sakilipu (?)	Circlip (?)
63	Turosi wosa	Thrust washer
64	Tarodu	Tie/ radius rod
65	Totu /tortu caple	Throttle cable
66	Tapet masin	Tappet machine

67	Uku pakin	Hook packing
68	Wota popu	Water pump
69	Willi	Wheel

Discussion of Findings

The data above show that the respondent mechanics present no knowledge of spelling of automobile lexical items nor can they pronounce correctly, due to their very low literacy level. Thus, it is their stylistic peculiarity to carry on the technician profession of automobile repairs by ‘Yorubalising’ the names of the parts of motor vehicles e.g rimu, bakasu, safo, ritena, sok an sofa, etc. However, they were able to identify these automobile parts and carry out efficient repairs on them. In other words, although their literacy level, especially English language reading and writing skills appear poor, they nevertheless have acquired a high level of automobile technical skills in a strictly informal setting devoid of formal examinations and certification. Although they pronounce and write badly, they recognize very well the names of the parts they pronounce or write. Thus, while the technology is here with us in English, the users and mechanics are Yoruba. Automobile engineering and repair is therefore a point of contact here between Yoruba language as L1 in the South-western Nigeria and English language as L2. The result is phonological and lexical interference as style.

From table 3, it is clear that the names of automobile (auto) parts, which are here regarded as auto technical terms (ATTs), are written by the mechanics the way they pronounce them as speakers of Yoruba (as) Mother Tongue (YMT). Since English letters such as C,V,X and Z are not available in the Yoruba alphabet, it may be difficult for them to pronounce such ATTs as cone rod, valve, axle, etc., especially given their literacy level. In other words, there is no one-to-one relationship between the English and Yoruba consonant and vowel sounds, as a result of which we record the following occurrence: the English Th (as in Thrust), ee (as in steering), C pronounced as K (as in carburetor), thr, ttl (as in throttle), i pronounced as /ai/ (as in pipe), oo pronounced as /u/ (hook), ey as /i/ (key), two or three consonant sounds without intervening vowels (crank shaft, bolt, gasket, plug, adjuster, pump, ignition, etc).

The English syllable structure is constructed as (CCC)V(CCCC) or (C⁰⁻³) V (C⁰⁻⁴); in other words, to have a single English syllable, there can only be a maximum of three optional consonant sounds before one obligatory vowel sound followed by a maximum of four optional consonant sounds (e.g spray /sprei/, glimpsed /glimpst/, asked /a:skt/ each word consisting of one syllable). The syllable structure of Yoruba, a tonal language, however, is (C)V; that is, a maximum of one optional consonant sound before one obligatory vowel sound (e.g. ‘ile’ meaning ‘house’, consists of two syllables; ‘ikilo’ meaning ‘warning’, consists of three syllables). There is therefore no one-to-one correspondence between the syllable structure of English and Yoruba languages. The interference between these two codes at the level of phonology is therefore unavoidable, even among educated English (L2)-Yoruba (L1) speakers, and is thus so much pronounced among the mechanics given their literacy level.

We have a completely different application of ATTs by the mechanics. For instance, the Longman Dictionary (2005) defines throttle (pronounced and known as ‘totu’ by the mechanics) as ‘a piece of equipment that controls the amount of fuel going into a vehicle’s engine’, but which is being used, by the mechanics, and in fact by most car users, in place of ‘pedal’ or ‘accelerator’ which the same dictionary defines as ‘a part in a car or in a machine that you press with your foot to control it’ or ‘...to make it go faster’. The same applies to

the use of the term ‘kokodi’ in place of ‘back axle’, perhaps because that part of the motor vehicle has the shape of a ‘pot’ known as ‘ikoko’ in Yoruba, and is found towards the back of the vehicle, simply known as ‘idi’ in Yoruba. These two words thus combined give us ‘ikoko idi’ simply shortened to ‘i-kokodi’ or better still, ‘kokodi’.

Some of their writings are outright unintelligible, meaningless or unrelated to any automobile part, e.g. chine, cabet, danba, corodu, corodu pusin, F & B olisili, fabu olisili, fabonsic, ena sporket, king serfit, sakilipu, etc., but for the fact that they know and can identify what they mean or refer to. However, another Yoruba speaker and user of motor vehicle can as much as possible understand this language especially when pronounced by the mechanics. This is to the extent that these mechanics are almost succeeding in giving us a totally different idea of the correct nomenclature of these automobile parts such that most automobile users have imbibed these wrong pronunciations (e.g. salesa, verb, ragilator, contaset, kokodi, ansoga, etc), including engineers, if only for mutual comprehension.

The mechanics are certainly too far away from writings of any kind, and usually shy away from writing, and have thus developed poor writing skills of both the English and Yoruba languages. This must have affected their knowledge of spellings. They do not write proposals, reports, official letters, or bid for private or government contracts. It is either that they never saw any need for this, suffer inferiority complex or that they have believed in their lack of capacity to do so.

They also do not seem to see any need to read anything, including packages of automobile parts which normally contain the name of the items they hold, and which they buy and use everyday. This is why they usually never get the names (especially spellings) correct. Thus, along the line they have developed a very poor reading habit. Their very low level of literacy has conferred on them a compelling feeling of inferiority complex. This feeling is capable of making them see themselves as no-bodies, unsuccessful, while feeling envious and angry, and as dregs of the society who have next to nothing to contribute to the society let alone to the country’s technological development.

Against the impression of a low literacy level with which the respondents have been painted, stands out the high literacy level of one of the respondents with an OND qualification, and his ready capacity to flow in line with modern technological advancements regarding automobile repair and maintenance. However, he is alone, and could hardly reason beyond the level of the majority of the mechanics. Our findings reflect a positive attitude of the mechanics to all kinds of training meant to improve their situation as 97% of them (see Table 2e) are willing to undergo such trainings. With this training, their situation can gradually be improved, especially their literacy level, while their technical and professional potentials can be highly promoted to a very useful level. Our data (re-presented below) also show that only 20% of them left school because they did not understand what the teachers were teaching, yet they are at home with the complex system of an automobile.

Only 18% of them claim that they left school due to their interest in automobile repairs. More than half of our sample (53%) left school because of poverty or financial constraints. In other words, most of the mechanics left school not because they are not intelligent but because they found themselves in one problem or the other different from want of intelligence. For instance, one of the thirty-eight respondents (3%) says he became an automobile technician because it was divined that that was the job he was destined to do from heaven.

Implications of findings

The unacceptable implication of the automobile mechanics' level of literacy is that it forecloses their capacity to improve technically and professionally through reading and studying technical materials, manuals, automobile operating instructions, automobile components and technical repair tools. Such acquired knowledge could help to enhance their skills for carrying out more intelligent, efficient and organized automobile repairs, and to vouchsafe sound and informed technical advice to vehicle owners/users on servicing, getting original/genuine engine parts, etc. It must be added that if these technical reading materials had been in Yoruba, the mechanics' mother tongue (MT), they might be able to use them. English to them is therefore an impediment, and this has to be conquered one way or the other, which is the subject of a forthcoming research work.

Also due to their poor English literacy level, their ability to liaise and cooperate with non-Yoruba speaking colleagues in and outside Nigeria on new techniques, technologies, models, vehicle parts, tools, instrument, methods and other useful issues is constrained. Their inability to communicate in English limits their access to modern developments in the automobile repairs and industry; besides, they cannot source or access information materials prepared in English. For instance, that they cannot spell technical names correctly shows that in spite of the fact that they buy and use new spare parts with their (spare parts) names written on their packages, they still cannot, or do not, read them.

Furthermore, due to this poor literacy level, they are cut off forthwith from the use of the ICT/internet resources prepared in English for technical and professional improvements, sourcing better and modern methods and means of effecting vehicle repairs, maintenance, sourcing genuine spare engine parts, etc. These findings cast on us a bleak but redeemable picture of a set of mechanics whose technical skills are constrained by a debilitating level of illiteracy. While the engineers can design, technicians can implement, repair and maintain, of course without them, the automobile repair industry would have been a hard nut to crack. However, their poor literacy level has affected the capacity to achieve effective maintenance of Nigerian automobiles: most of them can hardly give reliable technical advice on motor vehicles in the country. Secondly, their level of technical innovation is equally limited.

Interestingly, the pedagogical implication of our findings is that we have a set of data that can serve as resource for teaching linguistic interference (see table 3 above) at the level of phonology (e.g. fabu, oobu, ritena), lexical (e.g bakasu, kokodi) and morphology (e.g. ansoga, sok an sofa, salesa).

Conclusion and Recommendations

It is clear from the above that the literacy level, especially the reading and writing skills, of our road-side mechanics in the south-western Nigeria is very poor; however, they have been able to serve the automobile technological needs of the country as far as repairs are concerned within the limits of their technical know-how. This shows that in spite of their literacy level, they still have very crucial roles to play in the technological development of the country. Improving their literacy level would open up a world of opportunities to them in terms of developing themselves professionally, carrying out more efficient technical repairs, vouchsafing more reliable technical advice to automobile users, interacting with colleagues within and beyond their shores, developing the skills for innovations, accessing useful technical information from technical materials prepared in English, accessing the internet, contributing to the country's technological development, etc.

There is therefore the need to realize the significance of coming to the aid of these mechanics in a four-fold formula, namely language and communication skills improvement training, especially the writing and reading skills in English and Yoruba; professional technological orientation through workshops and seminars known as continuing engineering education; certificating them; and finally, providing financial support and empowerment to help them set up standard, modern workshops and acquire modern tools. Through them, Nigeria's technological development can be fast-tracked.

Mechanics in south-western Nigeria are in need of serious professional programmes aimed at brushing away their inherent inferiority complex and making them realize that they have crucial roles to play, and that they need to make use of their skills and talents to support and develop the country's technological development. They are also in need of regular professional workshops and trainings to challenge their intellectual curiosity and technical skill, and to show them modern trends in the world of automobile repairs and technology. This is part of what is known as continuing engineering education (CEE).

There is the need to improve their literacy level through special language workshops tailored to their level and needs. Such workshops should be tailored towards instructing them on correct pronunciation of automobile parts as a way of encouraging them to develop their language and communication skills. They can also be gradually sensitized on the potential roles of the ICT in automobile repairs, by introducing them to documentaries on how the computer and the internet can help them on areas such as troubleshooting, repairing, modelling, designing, modern tools and equipment, and generally make their tasks easy and alluring. This is also part of continuing engineering education (CEE). In recent times, we are beginning to have in our midst computerized, fully or partly automated motor vehicles, and this trend is still growing.

Furthermore, there is the need to get them certificated so as to make them see the importance of literacy for improved performance, for the purpose of regulating their activities and eliminating quacks. Government should work out modalities to give Nigeria's auto-technician financial empowerment, such as helping them with soft loans to acquire modern tools and standard workshops. All government interventions mentioned above - language training, professional workshops and financial assistance - should not be limited to mechanics alone, but should be extended to automobile electrical repairers (a.k.a. re-wire), the battery chargers, the re-winders, electronics repairers, and the automobile body repairers or builders (a.k.a. panel beaters).

Relevant engineering and technology departments in higher institutions could work out how to bring these road-side mechanics in and make them conduct practical classes for students in their workshops. This partnership portends a lot of mutual benefits for the institution, the nation, and the road-side mechanics. For the institution, it would be able to turn out better trained, highly skilled, self-reliant graduates, develop indigenous technology through combined efforts, and thereby reducing poverty, and adding value to Nigeria's tertiary education. For the road-side mechanics, they would be able to use their skills in a more organized setting, learn new things, acquire further experience, get exposed to modern methods of detecting errors, get exposed to modern repair and maintenance equipment and tools, and thereby contributing to the country's indigenous technological development. The nation would then be on the road to technological emancipation.

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