

---

# Advantages of Bilingualism and Multilingualism: Multidimensional Research Findings

---

Evelyn Fogwe Chibaka

Additional information is available at the end of the chapter

<http://dx.doi.org/10.5772/intechopen.74625>

---

## Abstract

Bilingualism and multilingualism are often perceived and considered as a problem or a major challenge to individual and/or societal development. In most instances, the only advantage recognized for the bilingual individual is the ability to use two or more languages. Beyond that, monolingualism seems more attractive, and monolinguals especially those speaking a language of wider communication seem quite content with their lot, often adopting a condescending attitude toward minority native speakers of a mother tongue who in addition have to acquire their language. Adepts of the ideology of **monolingual habitus** (one nation, one language) have tended to consider multilingualism and linguistic diversity as a curse and an obstacle to nation building. This chapter argues against the above ideology through a compendium of empirical evidence of advantages of individual bilingualism, societal multilingualism, and linguistic diversity of nations that emerge from research findings in the last several decades.

**Keywords:** advantages, monolingualism, bilingualism, multilingualism, linguistic diversity, multidimensional, ideology, empirical evidence, research findings

---

## 1. Introduction

It is averred in some circles that linguistic diversity evidenced by multilingualism is a **curse** because of the challenges involved in building a pluralistic nation in the face of linguistic and cultural diversity [1–10]. However, there is enough evidence that, globally, *multilingualism is the norm and monolingualism the exception* [11] and the advantages of bilingualism and multilingualism need to be identified, exploited, and used for individual growth and national development. This chapter does not belabor the fact that bilingualism or multilingualism is

more advantageous than monolingualism; it rather appraises a range of multidimensional evidences that have been established from varied research findings, highlighting the benefits of bilingualism in individuals or plurilingualism and multilingualism in different societies. It explores the phenomenon of bilingualism and multilingualism, how it can be a “blessing” and not a “curse” at both levels of its manifestation. The chapter is thus largely a compendium of empirical evidence of the advantages of individual and societal bilingualism/multilingualism and linguistic diversity of nations as established by research findings in the last several decades from studies by linguists and scholars such as Byram [5], Baker et al. [6], Bialystok et al. [7], Ewert [12], Paradowski et al. [9], Grin et al. [10], etc. Thus, our focus is not only on identifying the different advantages (a thing already partially covered in many reports) but also in bringing out the different research techniques and methodologies that have been used in arriving at the different claims or justifications of advantages for these bilinguals or multilinguals. Our discussion is presented in two major sections. The first on the “advantages of individual bilingualism/multilingualism” outlines such themes as cognitive development advantages of bilingualism; the brain of bilinguals as a neurophysiological organ; advantages for Alzheimer bilinguals; linguistic awareness, benefits of communicative ability, and competence; advantages in academic or educational performance; sociocultural, economic, and political advantages; etc. The second section handles benefits of “societal multilingualism,” i.e., the advantages of multilingualism for communities and the nation. The two divides—individual and societal bilingualism/multilingualism—are linked by our discussion of how they can be a blessing to any democratic nation, ending in concluding remarks that cap the research findings.

## 2. Background of study

Numerous scientifically supported research activities inspired by the UNESCO [13] and UNESCO [14] policy orientation on the promotion of linguistic and cultural diversity have employed different perspectives and definitions for the concept of bilingualism and multilingualism. The term multilingualism as employed here cuts across those implied or asseverated in these reports. Thus, multilingualism is considered first, as implying bilingualism, since in order to be a multilingual, one has to be exposed to at least one situation or experience of bilingualism. It is anticipated that all the features that hold for multilingualism do so too for bilingualism. But since multilingualism involves the use of more than two languages, it manifests a more complex scenario with operational characteristics that obviously overlap with those of the bilingual setting.

Nonetheless, the definition of multilingualism is as varied as the different interrelated disciplines that identify with it and the objective(s) of the research in question. The European Commission [15], for example, defines multilingualism as “the ability of societies, institutions, groups and individuals to engage, on a regular basis, with more than one language in their day-to-day lives.” This definition constricts both multilingualism and bilingualism in the expression “... more than one language...,” thus considering them as phenomena

with similar semantic content, properties, and consequences. It is this same assumption that is projected by Li [16], who looks at multilingualism in the light of “anyone who can communicate in more than one language, be it active (through speaking and writing) or passive (through listening and reading).” Li aligns with the school of thought for whom a multilingual person, group, or setting engenders *basic* proficiency in the use, speaking, or understanding of more than one language. It is the same perception that is clearly underscored by scholars like Skutnabb-Kangas and McCarty, [17] with claims that “today, the idea of perfect mastery and perfect balance of two or more languages is no longer considered a requirement for being bilingual or multilingual.” Concern thus shifts to the number of languages rather than the proficiency in their usage, an idea likewise maintained by authors like Vildomec [18], McArthur [19], and Edwards [20]. These consider multilingualism as “the ability to use three or more languages either separately or in various degrees of code-mixing. Different languages are used for different purposes, competence in each varying according to such factors as register, occupation, and education.” It is thus variously implied that the degree of proficiency is not essential; basic speaking and listening skills (communicative skills) of the speaker(s) are all it takes to be considered as bilingual or multilingual.

Despite different perceptions, the different definition perspectives converge on the assumption that the multilingual setting needs to have a speaker, group, nation, or activity/environment, where *two or more languages* are used for communication. None highlights considerations of the situational use/domain, function, degree of fluency, different manner, time, or place of acquisition of the second language and other languages.

All taken into consideration, the perspective adopted in this study is that of Aronin and O Laoire [21] that “plurilingualism” limits its scope to only individuals and not societal multilingualism. By implication, discussions about the different types of multilingualism, such as coordinate bilingualism, referring to person’s learning of two languages in separate environments/contexts; subcoordinate bilingualism, referring to the acquisition of the second language (L2) with the help of the first language (L1); compound bilingualism, which is the learning of two languages in the same environment, time, and even context; and the different stages of acquisitions and their degrees of proficiency levels as detailed by Bassetti and Cook [22] and Baker [23], are beyond the scope of this study. They, however, constitute useful typologies of the phenomenon for those interested in conceptual details.

There are, no doubt, some drawbacks involved in the active usage of more than two languages, including negative language contact phenomena like interferences, negative transfer or overgeneralization of language rules, code-mixing, tarnishing language quality, language shift, and language endangerment. Yet, the advantages obtained from the multidimensional appreciation of multilingualism overwhelm the disadvantages, which constitutes the motivation in developing this chapter. The review of most of the empirical research and evidence(s) that capture the varied claims of multilingual advantages is herein categorized (as indicated above) into two functional units: the individual and the societal (i.e., group, institutional, or national) multilingualism.

### 3. Advantages of individual bilingualism and multilingualism

In this section, we appraise empirical evidence of advantages to individuals with respect to cognitive development, aging complications, linguistic awareness, communicative competence, academic or educational performance, as well as sociocultural and economic benefits.

#### 3.1. Advantages of bilingualism in cognitive development

Asserting that bilinguals or multilingual individuals have **more improved cognitive abilities** than monolinguals is not a sentimental claim, but one substantiated by scientific experiments conducted to validate the point. The 1989 publication of Foster and Reeves [24], for example, details the use of the *Ross test* for cognitive function and the *Butterfly and Moths test instruments* for the assessment of metacognitive processes in a group of English-French bilinguals receiving instruction in French and the control group of English monolinguals. They came up with the findings that “the students who had received foreign language instruction scored higher on tasks involving evaluation which is the highest cognitive skill according to Bloom’s taxonomy. The linear trend analysis showed that the students who had studied French the longest, performed the best.”

That bilinguals and multilinguals have proven to be more creative and apt with respect to flexible thinking ability is now a widely accepted fact supported by Landry [25] for whom bilinguals not only have “... the ability to depart from the traditional approaches to a problem, but bilingual competence also supplies them with possible rich resources for new and different ideas.” Landry’s statement is a conclusion arrived after his research on the evaluation of thinking figural tasks assigned to both bilingual and monolingual groups of elementary students using both *historiometric* and *psychometric research methods*. At the end of his study, the bilinguals came out with significantly higher grades than the monolinguals. Hence, the outstanding performance realized from his experimental group buttresses his claims that the bilinguals are cognitively more creative and proactive in nature.

Another study, conducted by Mohanty [26], indicates that bilinguals “**exercise [...] superiority in cognitive, linguistic, and academic performances**” over monolinguals. He reported that in “[a] series of studies involving the comparison of unilingual and balanced bilingual children, with respect to the *metalinguistic hypothesis* these studies show that the bilinguals outperform the unilinguals on a number of cognitive, linguistic, and metalinguistic tasks, even when the differences in intelligence were controlled.” His interpretation of the results is incontrovertible in that, after the control of all the other obvious interfering factors and variables, the only possible variable that could be contributing to the excellent performance of the experimental group was their bilingual status.

Furthermore, on cognitive-related advantages for bilinguals, Ricciardelli [27] carried out a similar research on Italian-English bilingual and Italian monolingual children, in which he measured their metalinguistic awareness, creativity, nonverbal abilities, and reading achievement through *proficiency testing*. His report states that “Results of comparison of performance on the measures of cognitive development indicate that students who demonstrated high proficiency in both

English and Italian achieved **higher scores on the creativity, metalinguistic awareness, and reading achievement tests.**" The outcome of his study is not very different from what Mohanty [26] observed with the bilinguals in his research population as stated in the above paragraph.

With the neurocognitive perspective, using *neuroimaging methodologies*, Wodniecka et al. [28] provided a comprehensive account to justify their claim that "Given that the differences observed spanned several measures of structural integrity, including enhanced gray and white matter as well as enhanced long-range connectivity in bilinguals compared to monolinguals, it has been suggested that the enhanced cognitive and neural functioning in bilinguals may rely upon this enriched neural architecture." These researchers, based on their findings, concluded that "These results consequently suggest that the **bilingual executive control advantage** does indeed extend to memory as **bilinguals were selectively advantaged in recollection as opposed to familiarity judgments.**"

Furthermore, and in the same light about the advantage in cognitive development, Rodriguez [29] investigated the effect of bilingualism on the cognitive development and linguistic performance of children at various ages living in the same cultural environment. Here, abstract thinking was measured using *verbal and nonverbal cognition test*. He reported from his findings that "The bilingual children used higher order rules more frequently than the monolingual children. The evidence seems to suggest that **bilingualism may scaffold concept formation and general mental flexibility.**" The avalanche of research evidence discussed underscores the fact that bilinguals are undoubtedly endowed with cognitive benefits as a result of their capacity to use and process two or more linguistic codes.

### 3.2. Bilingualism and delay of Alzheimer's disease or aging mental disorder

Studies conducted on patients with cognitive complaints (dementia or Alzheimer's disease) in a memory clinic, using the measurement of *the rate of decline in Mini-Mental State Examination (MMSE) scores*, as recorded over a span of 4 years from diagnosis date, indicated that there is a **significant delay of the symptoms of old age dementia recorded in bilinguals**, which on the other hand manifests faster in monolinguals. This prevalence of delayed Alzheimer's disease in bilinguals is also what [7] 105) describe as "strong epidemiologic evidence to suggest that older adults who maintain an active lifestyle in terms of social, mental, and physical engagement are protected to some degree against the onset of dementia. Such factors are said to contribute to cognitive reserve, which acts to compensate for the accumulation of amyloid and other brain pathologies." This finding highlights multiple advantages, including **efficient and sustainable executive functioning and cognitive control, old age mental or cognitive health guarantee, and even socioeconomic benefits** since it saves healthcare expenses for the bilinguals.

The bilingual status as a major factor enhancing the cognitive reserve of bilinguals' brain atrophy (delay) in dementia symptoms has been well articulated by Schweizer et al. [30], conforming with and confirming earlier findings by the likes of Bialystok et al. [7], Craik et al. [31], and Chertkow et al. [32]. Schweizer et al. [30] did carry out, in both bilingual and monolingual Alzheimer's patients, a significant number of linear measurements of brain atrophy from the *computed tomography (CT) scan*. After controlling other variables like level

of cognitive performance and years of education, they arrived at a finding that bilinguals did manifest an increased cognitive reserve (CR) with greater amount of brain atrophy (delay) than the monolinguals—indicating **a delay in the onset of Alzheimer disease and much better cognitive performance** than would be expected from their level of dementia disease. They further emphasize that the advantaged cognitive reserve of bilinguals serves as **a protective mechanism that helps to increase their brain’s potential to cope with Alzheimer’s pathology.**

### 3.3. Bilingualism in the management of chronic aphasia

Aphasia, defined by the US National Aphasia Association as “an impairment of the ability to use or comprehend words, usually acquired as a result of a stroke or other brain injury,” is “a communication disorder resulting from a stroke or traumatic brain injury” [33]. This acute or chronic condition can be better treated in bilinguals than monolinguals. Haynes’ research team carried out their study on nine chronic aphasia patients under the framework of *Outcome Measurements in Aphasia* study, where the patients were exposed to “teletherapy services that combined group therapy with one-on-one therapy sessions and online *TalkPath* language exercises.” The findings were that **poststroke aphasia therapy was more responsive in bilinguals** than in monolinguals. They explained that the bilinguals were able, after stroke, to undergo a process of “transfer effect” to the primary language. Their findings go to confirm Ellis et al.’s [34] claims that “... when a person who speaks two languages experiences brain damage leading to a language condition called aphasia, the second, less dominant language can be used to transfer knowledge to the primary one, helping with rehabilitation.”

### 3.4. Bilingualism and enhancement of linguistic awareness and communicative competence

In appreciating some of the benefits of communicative ability and communicative competence of bilinguals, Dickinson et al. [35] used the results from their investigation on “whether there is a cross-language transfer of phonological awareness” to support this added advantage for bilinguals. They engaged 123 Spanish-English 4-year-olds in a number of testing techniques such as the acronymic EPAP or *Early Phonological Awareness Profile* measurement technique [36]; the *Emergent Literacy Profile* competence assessment task, abbreviated ELP [37]; and *rhyme recognition* tasks. Their findings go to support the fact that there is a significant transfer of phonological features from a speaker’s first language to the second, especially when they share some phonological entry similarities. This positive transfer is no doubt a bonus to bilinguals since **it develops their linguistic competence in other languages and broadens their content exposures of different academic or literary materials across linguistic boundaries.**

Abutalebi et al. [38] employed functional *magnetic resonance imaging techniques* in the investigation of the neural correlates of language selection processes in German-French bilingual subjects during picture naming in different monolingual and bilingual selection contexts. Their scientifically aligned evidence bolsters the fact that bilinguals have an added advantage in their capacity to switch-on one language when in use and deactivate the other during a

communication act, **helping to orientate the portion of the bilinguals' brains that stimulate linguistic awareness and subsequently improving their communication skills.**

The edge that bilinguals have over monolinguals has also been shown by the Barac and Bialystok [39] investigative research on how language, cultural background, and education can **enhance cognitive and linguistic development in bilinguals.** They experimented with a population of four groups of 6-year-olds (English monolinguals, Chinese-English bilinguals, French-English bilinguals, Spanish-English bilinguals), testing them *verbally and nonverbally with executive control tasks*. The result of their findings was that all the bilingual groups performed exceedingly better than the monolingual groups and the best performances registered on the language task were produced by the bilinguals whose language of instruction was English, the testing language. The outcome of this study led the researchers to claim that **bilingual experiences foster linguistic competences in varied verbal tasks in life.** As these sets of research studies testify, the bilinguals, eventually, in their use of more than one language, **develop better language proficiency, sensitivity, and definitely more in-depth understanding and control of their mother tongue.**

The benefits of communicative poise and competence of bilinguals have also been voiced by Cook [40]. He comments that bilinguals have "a more extensive range of affordances or interpretations providing them with a greater number of options from which to choose". This leads to a view of the **bilingual as having increased competence or multi-competence** (where multi-competence is defined as the added capacity resulting from bilingualism. This notion of multi-competence was later (1992) further elaborated on by Cook thus:

*These subtle differences consistently suggest that people with multi-competence are not simply equivalent to two monolinguals but are a unique combination ... so the multicompetence state (L1+ L2) yields more than the sum of its parts, L1 and L2. Thus, a bilingual that is seeking to solve a problem in one language is thought to be able to draw on the other language and related frames of mind to bring extra cognitive capacity to bear in solving a problem. ([41] 557).*

A study carried out by Kessler and Quinn [42] on grade 6 students (monolingual English speaking and bilingual Spanish and English speaking groups), using both *standardized reading and verbalized test*, came up with the findings that the bilinguals outperformed the monolinguals in generating more complex hypotheses. They interpreted their findings to mean that the complexities of the language structures of the bilinguals are occasioned by **their ability to undertake convergent high thinking activity, and this relates to a property possessed by most bilinguals** from their studied population. This smart trait in bilinguals equips them with the inflected potential to be metaphorical in their expressions, as later captured by Baker's [43] claim that the **bilinguals are "creative" in nature.** Also, their communicative sensitivity, which was part of the findings of Kessler and Quinn [42], May et al. [1], confirms that the multilinguals, as a result of their diverse language experiences, **have high self-confidence and stronger willingness to communicate without fear of constructing non-well-formed utterances.**

As far as linguistic awareness, communication ability, and competences go, it can be briefly affirmed that all the authors outlined in this subsection of the chapter attest that the advantages of **being a multilingual speaker extend to other problem-solving aspects in life, besides the communicative resourcefulness and creativity privilege** they have over monolinguals.

### 3.5. Benefit of bilingualism to academic performance

When we talk of exposure as a better teacher, we align with Cook's [44] conviction that.

*...a person who speaks multiple languages has a stereoscopic vision of the world from two or more perspectives, enabling them to be more flexible in their thinking, and learn reading more easily. Multilinguals, therefore, are not restricted to a single world-view, but also have a better understanding that other outlooks are possible. Indeed, this has always been seen as one of the main educational advantages of language teaching.*

This perspective of the benefits for bilinguals sees them as **persons with a better ear for listening [...and] endowed with sharper memories on diverse issues in life**. It is but normal then to consider **the bilinguals as better problem solvers**, since their bilingual exposure provides them with multiple perspectives on issues at hand and **better critical thinking abilities**.

Knowledge of a second language also seems to coincide with high academic achievement. A study by Horn and Kojaku [45] shows that students who were in "rigorous" programs in high school, which included 3 years of foreign language study, were more likely to earn better grades in college and less likely to drop out. This finding is a pointer to the claim that **bilinguals have the potentials to attain high academic standards with less effort** than monolinguals. This position is reinforced by Curtain and Dahlberg [46] who assert that "... the positive impact of cultural information is significantly enhanced when that information is experienced through foreign language and accompanied by experiences in culturally authentic situations." Thus, experiences in learning a second language and learning another culture will facilitate teachers' interactions with their students' learning experience. In other words, competent teachers understand that a positive self-concept and a positive identification with one's culture are the basis for academic success.

Academic advantages for bilinguals have been affirmed by research conducted by Keshavarz and Astanch [47] with one group of Persian monolinguals and two groups of bilinguals. They used the *Controlled Productive Ability Test* in English to evaluate their knowledge and performance in English language. Their performances revealed a clear difference in marks between the bilinguals and the monolinguals as bilinguals performed significantly better than monolinguals. They suggest that the prior foreign language experience of bilinguals place them in vantage position in learning another language, as this helps to **improve their ability to learn and recall English vocabulary better than their monolingual counterparts**. This claim is also attested to by Murphy [48] and MacWhinney [49] who say that **bilinguals have more opportunities to transfer knowledge and language governing rules from one language to the other, making it easier for them to learn overlapping cognates in form and meaning across languages**—opportunities which of course monolinguals do not have. From their analysis, by virtue of the fact that bilinguals already know two languages, positive transfer and familiarity with language structures and rules of previous languages become very useful in their acquisition of another foreign language.

To this stack of evidences must be added (Nayak et al. [50]), whose study of a group of monolingual and multilingual subjects concluded that multilingual subjects performed better than monolinguals in learning the rules for syntax when exposed to formal teaching of such rules,

as well as exposure to tasks in syntax. Multilingual subjects were also more capable of structuring their strategies to the task and used a wider variety of different strategies. They concluded that **multilinguals, compared to monolinguals, have superior flexibility in switching strategies**, which is a skill that equips them to better handle concepts and rules governing the acquisition of languages and related aspects.

### 3.6. Bilingualism and enhancement of career opportunities

The advantages of being bilingual are more visible in today's job market than in the past, especially with the advent of globalization and the rapid rate of technological advancement reaching all nooks and crannies of the world. This is evidenced in a *survey* of 581 alumni of The American Graduate School of International Management in Glendale, Arizona, where most respondents said they had **gained a competitive advantage from their knowledge of foreign languages and other cultures**. They said that not only was **language study often a critical factor in hiring decisions and in enhancing their career paths, but that it also provided personal fulfillment, mental discipline, and cultural enlightenment** (cf. [51]).

Also, in recent years, the US government has expressed a **need for fluent speakers of languages other than English**, particularly in less commonly taught languages such as Arabic and Chinese (US General Accounting Office 2002). It is obvious that even official monolingual countries like the USA have recognized the advantages of having citizens with competence in more than one or two languages in its job market and that multilingualism is a force to reckon with and to encourage.

### 3.7. Bilingualism and information processing edge

There is evidence that **bilinguals are better equipped for information processing than monolinguals**. The fact that multilinguals have knowledge of at least two language systems provides them with **potentials to switch the functionality strategies of one language to the other as the need demands**. This vantage position of the bilinguals was articulated by Meiran [52] after her experiment with the use of *functional magnetic resonance imaging (fMRI)* in testing coactivation and inhibition in bilinguals during spoken language comprehension. According to the researcher, "It's like a stop light [...] Bilinguals are always giving the green light to one language and red to another. When you have to do that all the time, you get really good at inhibiting the words you don't need." Benefits accrue because the bilingual brain is constantly activating both languages, choosing which to use and which to ignore. When the brain is constantly so exercised, **it does not have to work as hard as the monolingual's to perform most cognitive tasks effectively**.

Also, the simple ability of bilinguals to switch from one language to the other indicates that **they can, with limited effort, relate to reflexes and transfer of language rules, which is a pointer of general task-specific switching mechanism in operation**. This talent claim has been supported by Yehene and Meiran [53] who specify that "bilingual language switching may increase general switching efficiency, and might be stronger at a long *cue-target interval (CTI)*, which may better tap general switching abilities." They justify this claim with findings from their experiment on 80 Spanish-English bilinguals and 80 monolinguals engaged on a

*color-shape switching task and an analogous language-switching task, varying CTI (short vs. long) in both tasks. At the end of the study, it was determined that the cost of task-switching among the bilinguals was smaller, more economical, and more cost-effective than that required by the monolinguals. They explain that these findings substantiate the association between bilingualism and the **switching efficiency trait, an advantage in fast and successful diversifying task engagements in the life of a bilingual**, especially with respect to information processing.*

### 3.8. Sociocultural advantages of bilingualism

It is now well accepted that language and culture are inextricably linked because, as articulated in Chumbow [11, 54], language is the means by which people who share the same culture express their belonging to a common or shared cultural experience. Considering the fact that culture is transmitted and expressed through language, multilinguals are obviously multicultural individuals who can adapt different cultures more easily. The implication is that they are better placed to handle cultural shocks than monolinguals. This is closely related to **intercultural competence**, summarized by Curtain and Dahlberg [46] who states that "... exposure to a foreign language serves as a means of helping children to intercultural competence. The awareness of a global community can be enhanced when children have the opportunity to experience involvement with another culture through a foreign language." Here, intercultural competence is considered as the ability for successful communication with people of other cultures. This ability can exist already at a young age or be developed and improved, thanks to willpower and competence [55]. In any case, high intercultural competence in multilinguality **enables multilingual individuals to appreciate and accommodate any foreign culture easier than monolinguals.**

Cook [44] supports the sociocultural advantage by stating that "multilinguals can expand their personal horizons and — **being simultaneously insiders and outsiders** — see their own culture from a new perspective, not available to monoglots, enabling the comparison, contrast, and understanding of cultural concepts." Thus, **multilinguals can better understand and appreciate people of other countries, a factor in lessening racism, xenophobia, and intolerance**, since the learning of a new language usually brings with it a revelation of a new culture.

Related to cultural flexibility, one opportune factor for bilinguals is **their ability to excel in conflict resolution tasks**. In two experiments, using the *Flanker task test* [56], both monolinguals and bilinguals were asked to perform a flanker test task under two low-monitoring and two high-monitoring versions of congruent and incongruent trials, respectively. The result was that the bilinguals had the overall reaction time during the high-monitoring condition in which they outperformed the monolinguals. This indicates that **the bilinguals could more easily affect the monitoring processes involved in executive control during conflict condition** than their monolingual counterparts.

### 3.9. Economic advantages of bilingualism

It has been asserted that "language is power" and it is an invisible force that can penetrate visible social and economic boundaries [57]. Being multilingual can be considered as a form

of human capital for **it can afford one the opportunity of earning higher income and obtaining aspiring employment status in any influential society**. A research study by Di Paolo and Tansel [58] shows that in the Turkish labor market, knowledge of Russian and English as foreign languages, on the average, **brings about positive earning differentials for individuals** (20 and 10.7%, respectively). These differentials increase with the level of competence. Knowledge of French and German is also positively rewarded in the Turkish labor market, although to a lesser extent (8.4 and 8.2%, respectively). In Williams' estimation, the use of a second language in the workplace is associated with positive earning differentials, ranging from 3 to 5% in different Western European countries [59].

Since individuals make a society, the higher the number of residents with foreign language competence in a community, the more benefits that community will get from the positive attributes and affluence that come with bilingualism and multilingualism. Most of the advantages of individual bilingualism aggregate to quantifiable economic gains for the individual and the society or community. That is why some countries like Britain, America, France, and Holland which are officially monolingual realize the benefits of official bilingual or multilingual nations by virtue of intense de facto unofficial bilingualism and multilingualism attested within the nation state. These noted national advantages of multilingualism transition us into the discussion of the advantages that bilingual and multilingual states get.

#### 4. Advantages of societal multilingualism

The advantages that any multilingual society would gain outrightly supersede that from a monolingual society in many dimensions given the aggregate advantages of individual bilingualism as seen above. However, considering societies as multilingual does not bring out the same vivid anticipation as in individual bilingualism or multilingualism. When it is societal multilingualism, the state has to install institutions and policies to legally and officially implement the different languages concerned, clearly defining their societal functional domains and so creating an environment of diglossia or multiglossia. This is explained by Fishman [60, 61] as follows: "Diglossia (Greek root for two languages, *di-glossia*), the use of two languages for different purposes *in a societal group*, is different from bilingualism (Latin roots for two languages, *bilingual*), which is the use of two languages *by individuals without societal support*." From this background, it is clear that individual bilingualism or multilingualism may or may not be officially supported. Therefore, multilingual advantages become selective and restricted to those who practice it in any society, whereas societal multilingualism is officially and legally backed with policies and structures to implement them within that confined society, putting in place language planning functional operation and implementation processes of revalorization, revitalization, instrumentalization, and intellectualization of the different languages recognized in that society (see [62–64]).

Properties of societal bilingualism or multilingualism are better judged or derived from the societies that operate on the premise of the status of official bilingualism or multilingualism such as *Belgium*, with the Dutch-speaking Flemish in the north and French-speaking Walloons in the south [65]; *Cameroon*, stemming from a union of territories of the British and

French colonial heritages; *Canada*, which has the original Protestant British and the Catholic French Quebec coming together; and *Switzerland*, where four national languages, French, German, Italian, and Romansch, are recognized from four cantons or territories ([66, 67]). It can be shown that these countries experience extra societal benefits partly due to their official multilingual-multicultural practices beyond official monolingual nations, even if they propagate unofficial linguistic heterogeneity. Some of these advantages linked to multilingual societies are manifested in the domains of economy, culture, education, security, and health. It must, however, be noted that multilingualism in most countries of the world, especially in Africa, is yet to be managed in such a way as to derive the full benefits of societal multilingualism. According to [63] “All African countries are multilingual in varying degrees; from two or three languages in Lesotho, Swaziland, Rwanda and Burundi to over 450 in Nigeria” [68]. The languages of the various ethno-linguistic communities of the nation are yet to be developed and used for development initiatives as is the case in Belgium or Switzerland for instance.

#### 4.1. Economic and business societal advantages

Multilingualism has been attributed the strength of promoting mobility of the labor force in a single marketplace, thereby **fostering employment heights and subsequent economic growth in the society**. Thus, if any nation wants to benefit from this type of economic force that can be easily generated by the mobile labor force, it has no choice than to operate a multilingual context. It is in this same light that the European Commission [69] explains that “language skills are presented as a type of ability that contributes to economic prosperity, an asset that increases the competitiveness of European companies, and a form of human capital that can positively affect citizens’ employability.” In this document, the Commission argues that **multilingual skill opportunity in any society will generate a mobile workforce environment, which is a huge labor market asset for that society**. In the Council Conclusions on Language Competences to Enhance Mobility [70], language skills are presented as “an essential component of a competitive knowledge-based economy. Knowledge of foreign languages is a life-skill for all EU citizens, enabling them to enjoy both the economic and social benefits of free movement within the Union.” It has also been attested that in Switzerland, skills in foreign or second languages (limited to English, French, and German) contribute to some 10% of the Swiss GDP, with English accounting for half of this percentage (cf. [71]). From all these studies and their skewed findings toward one direction, a positive direction, it is right to say that a multilingual society is exposed to more economic benefits than a monolingual one.

The Kiplinger Washington Editors in 1996 stated that in the USA, the Hispanic share of the work force would increase by 25% by 2010 and the Asian share by 50% and minorities would keep moving up the corporate ladder during the following 15 years. It asserted that managers who knew how to deal with a diverse work force would be advantaged. The analysis of this report underpins the fact that **the acquisition of a foreign language or being a bilingual is an added advantage over being monolingual because it broadens the margins of the speaker’s choices in the job market**. With the globalization phenomenon and increasing advancement

of technology, a **wide range of sociocultural exposure is very much in high demand, and this quality can be easily obtained by knowing and understanding different cultures and languages**. Thus, individuals who can communicate in at least two languages are considered as **assets to the communities** in which they live and work [72].

#### 4.2. Societal sociocultural advantage of bilingualism or multilingualism

Sociocultural integration is a vital element for developmental and general societal growth since the current rate of globalization, modernization, and technological advancement has reduced the world into a global village with a complex mixture of cultures and social values. In this vein, being multilingual and ipso facto multicultural is an added advantage to any society, as summarized in [73]:21): **“Providers of basic services (health, school, local authorities and courts) are increasingly in need of communicating with people speaking other languages** [whereas] their staff is not trained to work in languages other than their mother tongue and do not possess intercultural skills.” The EC statement here attests to the growing need of multilingual status to serve as a condition for social and economic integration in any society.

The European Commission [73] further suggests that **multilingualism helps in strengthening social cohesion, intercultural dialog**, and European construction (described as *social inclusion*), which can be defined as the process by which people resident in a given territory, regardless of their background, can achieve their full potential in life. Policies promoting equal access to (public) services and actions enabling citizens’ participation in the decision-making processes that affect their lives are examples of efforts to enhance the said social inclusion. On the other hand, *social cohesion* is related to the feature of a society in which all groups have a sense of belonging, participation, inclusion, recognition, and legitimacy. This coalesces in what has been labeled *intercultural dialog*, defined by the Council of Europe as “an open and respectful exchange of views between individuals and groups belonging to different cultures that leads to a deeper understanding of the other’s global perception.” And these advantages of intercultural relationship in a society are further elaborated in the EC [69] which states that “Language skills facilitate intercultural dialogue because they increase the capability of EU citizens to understand the culture of other fellow Europeans (and migrants), thereby contributing to European integration” ([69] 29).

A 1990 sociolinguistic survey research conducted by Lambert and Taylor in both the USA and Canada, using *questionnaires*, came up with a significant number of persons in both societies endorsing multiculturalism over assimilation. They explain that **“Pluralism and multiculturalism may lead to a positive attitude, not only to the host and minority cultures, but to the equal validity of all cultures**. With multiculturalism at its best, certain vices like prejudice and racism... are minimized in any society” (cf. [43]: 404). This reinforces the school of thought which holds the view that a multicultural setting breeds citizens who show more respect for other people and other cultures; persons who are less stereotypical, less culturally insular, and introspective in nature, hence cultivating grounds for mutual coexistence among persons from different races, ethnicity, and linguistic backgrounds within the same nation.

The various findings from different researchers and organizations discussed above, especially the EC and EU positions, thus constitute empirical support for the fact that multilingualism comes with sociocultural benefits that can transform any community into an optimal social intercultural haven for all its citizens.

### 4.3. Educational advantages of societal bilingualism or multilingualism

Perhaps no other field so directly shows up the benefits of multilingualism as education and the academia. This is generated at the level of multicultural ideology of which Baker [43] writes:

*Multiculturalism has, as one foundation, the ideal of equal, harmonious, mutually tolerant existence of diverse languages, and of different religious, cultural and ethnic groups in a pluralist society. A multicultural viewpoint is partly based on the idea that an individual can successfully hold two or more cultural identities; where it is possible to be Ukrainian and Canadian, Chinese and Malaysian, Mexican and North American. In a different sense, it is possible to be a Ukrainian-Canadian, a Chinese-Malaysian or a Mexican-North American, sometimes called the hyphenated variety.... In this sense, identities are merged; the parts become a new whole.... [and the] person becomes a more or less integrated combination of [the] parts. ([43] 402)*

The implication of Baker's ideology of multiculturalism is that individuals who have foreign language knowledge would lead a society to experience development in diverse domains, if allowed to operate in that society and to uninterruptedly use their linguistic and cultural competences.

Academic advantages as a result of multilingual competence are succinctly captured in the Moore's [74] follow-up report in *Language Matters*: "... **the lack of language skills limits researchers in their ability to engage internationally in or with their research, and in their career opportunities.**" This is a well-founded empirical advantage, for a researcher who is monolingual is limited by default from accessing very important research findings of scholars of other linguistic backgrounds from his. If this is the case, there is no doubt that such researchers will be retarded in their academic career due to limited literacy and literary materials exposure.

Nieto [75] more cogently advances the advantages of multilingualism in academia, suggesting that "multicultural education will ultimately be judged by its success or otherwise in being allied to 'high quality' and 'high standards' of education. **While multicultural education may successfully increase cultural and social awareness and stimulate critical thinking skills, a whole curriculum** approach must also show excellence in delivering basic skills, knowledge and understandings." It is in the same light that Cummins [76] argues for an approach to "transformative pedagogy" comprising (1) education grounded in the lives of students which is (2) multicultural, antiracist, and pro-justice, (3) participatory and experiential, (4) academically rigorous with high standards of performance, and (5) culturally sensitive. He postulates that (6) students should become critical in approach, (7) enabling them to feel safe, significant, and enthusiastic to share thoughts and feelings, and (8) active in promoting social change and justice.

#### 4.4. National security advantage of bilingualism or multilingualism

The advantage of national security in a multilingual setting is crucial to contemporary society where technology hacking in the context of a cold war is the norm, even in developing countries. It is becoming more necessary for security or defense personnel to be able to effectively interact with diverse populations in the world. The power of foreign language for national security cannot be overemphasized [as]. This is summarized by Garamone [77] as follows:

*Multilingualism also gives defense operations an edge in a multilingual society. The United States defense department is now encouraging its defense operation personnel to study a foreign language so that they can be more equipped in understanding the other culture that may be involved in the battlefield as well as in negotiations. ([77] 52).*

The essence of encouraging multilingualism in our societies has also been strongly echoed by Simire [78]:

*... institutions, organizations and various levels of government cannot clearly and effectively perform to the expectations of their respective communities unless they can understand and be understood by their host communities. Hence, it becomes imperative that we examine the linguistic and sociolinguistic importance of adopting a multilingual approach in solving Nigeria's complex linguistic problems in public and social life at the various levels of government as well as in academic and specialized institutions, in strict compliance with the country's past and current language policy.*

Simire's position is geared to seeking a long-lasting crisis-resolution strategy with the aid of the multilingual tool applications for countries like Nigeria and other African countries that operate on official multilingualism platforms.

#### 4.5. Health sensitization flexibility advantage of societal bilingualism or multilingualism

The value of multilingualism encompasses even the specialized field of health sensitization. For even when officially monolingual, most countries have minority languages and speakers of some dialects, who form the illiterate masses of the entire population. In cases where crucial health information is disseminated only in the lone official language of that nation, the nonliterate of that official language are deprived of information in addition to their always being the less privileged and more greatly affected ones. If a society is multilingual, it stands to benefit from the flexibility of its variety of linguistic codes to reach out to all the villages and suburbs of the nation, which is a faster and more assuring approach to disseminate urgent information on health-threatening issues to a wider population, for instance. In the Singapore context, for example, Chinese vernacular languages were used in radio and television announcements, while Singlish was used in a song commissioned by the government to alert citizens to take note of hygiene precautions during the severe acute respiratory syndrome (SARS) pandemic of 2003 [79]. This happened even though Singlish was usually frowned upon and discouraged by the government. Singlish was intentionally used in this

instance on the basis of reaching out to the “less educated Singaporeans” [79]. Thus, the use of multilingualism enables all citizens to be effectively mobilized for development in their own mother tongue or *language of the heart* [80].

## 5. Bilingualism or multilingualism as a blessing

The avalanche of empirical findings discussed here suggests that linguistic diversity in any society should be celebrated, developed, and maintained and not combated, and this requires more than just sweet-sounding policies. Accompanying institutions, resources, facilities, and proper implementation strategies and monitoring schemes are needed to make multilingual practices effectively operational. Only proper management of multilingualism will yield expected benefits.

In considering multilingualism as a blessing and not a curse for any society, we take the standpoint of an objective evaluation of certain parameters in both multilingual and monolingual societies, adopting the *linguistic disenfranchisement rate* proposed by the European Commission (cf. [81]) in evaluating the effectiveness of multilingual regime policy for European Union states. *Linguistic disenfranchisement rate* as defined by Gazzola et al. [81] is an analytic approach to give an objective picture of the benefits any society with a **multilingual regime stands to gain and exposes its country to sustainable evolution and development for its citizens**. This designed indicator check and effectiveness evaluating tool for multilingualism advantages involves “the inputs, the outputs, and the outcomes of a language regime.” The *inputs* are defined as the human, regulatory, and material means used to implement a policy (e.g., the costs of language services such as translation and interpreting), while the *outputs* are what are directly produced through the resources employed, typically, the number of pages of translated documents or the amount of hours of interpreting per year. The *outcome* is the effect of the policy on the target population. The evaluation of the effectiveness and the fairness of a language regime must be carried out on the basis of outcomes (cf. [82]: 6). From projects of this magnitude, the conclusion is that communication as “information transfer” [82] in different domains of societal networks inclusively engage the majority of the citizens of the societies and also widens the scope of progressive and global megaphone benefits at all levels of those societies. Gazzola’s [82] research on the disenfranchisement rate associated with some monolingual and multilingual European countries came up with the findings that the “percentage of citizens who potentially cannot understand EU documents (e.g., legal texts, regulations, webpages, call for tenders) and oral public discussions (e.g., meetings of the European Parliament transmitted via the Internet) because they do not master any official language” is higher in monolingual societies than multilingual ones, working on the interpretation that “the lower the disenfranchisement rate, the higher the effectiveness.” Thus, one could rightly hypothesize that the opportunities and privileges of multilingual societies outnumber those of monolingual ones.

## 6. Conclusion

Bilingualism and multilingualism provide an enormous number of advantages and opportunities at both individual and societal levels. Global and globalizing sectors including financial services, pharmaceutical, chemical, automotive, IT, and other human contact (social) services rely heavily on language skills to operate for commerce and delivery. Some of the ramifications of multilingualism benefits stretch to diverse fields of life for both the individuals and the societies that practice them. In a nutshell, the research results discussed in this chapter hold up bilingual or multilingual experiences in most instances as assets to both the individual and the society that make use of it. These advantages contribute to reinforcing UNESCO's position (arrived at on independent grounds) in favor of linguistic diversity and the consequent action of revitalization and maintenance of endangered languages [13].

## Author details

Evelyn Fogwe Chibaka

Address all correspondence to: [efogwe@yahoo.com](mailto:efogwe@yahoo.com)

University of Buea, Cameroon

## References

- [1] May DR, Gilson RL, Harter LM. The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology*. 2004;77:11-37
- [2] Gollan TH, Montoya RI, Werner G. Semantic and letter fluency in Spanish-English bilinguals. *Neuropsychology*. 2002;16:562-576
- [3] Gollan TH, Bonanni MP, Montoya RI. Proper names get stuck on bilingual and monolingual speakers' tip-of-the-tongue equally often. *Neuropsychology*. 2005;19:278-287
- [4] Wodniecka Z, Cepeda N. Beyond the classroom: Bilingualism. *Cognitive Skills and Health. A Journal for Language Teachers*. 2007;9:3-8
- [5] Byram M. *Teaching and Assessing Intercultural Communicative Competence*. Multilingual Matters; 1997
- [6] Baker C, Jones SP, editors. *Encyclopedia of bilingualism and bilingual education*. In: *Multilingual Matters*. 1998

- [7] Bialystok E, Craik FI, Freedman M. Bilingualism as a protection against the onset of symptoms of dementia. *Neuropsychologia*. 2007;**45**(2):459-464
- [8] Ewert A. L1 syntactic preferences of polish adolescents in bilingual and monolingual education programmes. *Morphosyntactic issues in second. Language Acquisition*. 2008;**29**:47
- [9] Paradowski MB, Cook VJ. Rola native speakera w nauczaniu języków obcych. *Perspektywa pedagogiczna, psychologiczna i praktyczna. Kształcenie językowe w szkolnictwie wyższym*. Warsaw: Academica; 2009:163-188
- [10] Grin F, Gazzola M. Assessing efficiency and fairness in multilingual communication: Theory and application through indicators. In: Berthoud A-C, Grin F, Lüdi G, editors. *Exploring the Dynamics of Multilingualism*. Amsterdam: John Benjamins; 2013. pp. 365-386
- [11] Chumbow BS. Linguistic diversity, pluralism and national development in Africa. *Africa Development*. 2009;**XXXIV**(2)
- [12] Ewert A. Do they have different L1s. In *Bilinguals' and monolinguals' grammaticality judgements*. Paper delivered at the 9th Nordic Conference on Bilingualism, Joensuu. 2006
- [13] UNESCO. *Language Vitality and Endangerment*, Ad Hoc Expert Group on Endangered Languages. Ms. Paris: UNESCO; 2003a
- [14] UNESCO. *Education in a Multilingual World*. Paris: UNESCO Position Document; 2003b
- [15] European Commission. *Final report: High level group on multilingualism*. Luxembourg: European Communities. 2007. Retrieved from: [http://ec.europa.eu/education/policies/lang/doc/multireport\\_en.pdf](http://ec.europa.eu/education/policies/lang/doc/multireport_en.pdf)
- [16] Li D. Pragmatic socialization. In: *Encyclopedia of Language and Education*. US: Springer; 2008. pp. 2648-2660
- [17] Skutnabb-Kangas T, McCarty T. Key concepts in bilingual education: Ideological, historical, epistemological, and empirical foundations. In: Cummins J, Hornberger N, editors. *Language Policy and Political Issues in Education, Volume 1, Encyclopedia of Language and Education*. 2nd ed. New York: Springer; 2008. pp. 3-17
- [18] Vildomec V. *Multilingualism*. Leyden: A.W. Sythoff von Studnitz; 1963
- [19] McArthur T, editor. *The Oxford Companion to English Language*. Oxford: Oxford University Press; 1992
- [20] Edwards J. *Multilingualism*. London: Routledge; 1994
- [21] Aronin L, ÓLaoire M. Exploring multilingualism in cultural contexts: Towards a notion of multilinguality. In: Hoffmann C, Ytsma J. editors, 2004:11-29
- [22] Bassetti B, Cook V, editors. *Language and Bilingual Cognition*. Oxford, UK: Psychology Press; 2011
- [23] Baker C. *Foundations of bilingual education and bilingualism (Vol. 79)*. In: *Multilingual Matters*. Buffalo, Toronto: Clarendon; 2011

- [24] Foster KM, Reeves CK. Foreign language in the elementary school (FLES) improves cognitive skills. *FLES News*. 1989;2(3):4
- [25] Landry RG. The enhancement of figural creativity through second language learning at the elementary school level. *Foreign Language Annals*. 1973;7(1):111-115
- [26] Mohanty AK. Bilingualism and cognitive development of kond tribal children: Studies on metalinguistic hypothesis. *Pharmacopsychocologia*. 1992. [psycnet.apa.org](http://psycnet.apa.org).
- [27] Ricciardelli LA. Two components of metalinguistic awareness: Control of linguistic processing and analysis of linguistic knowledge. *Applied PsychoLinguistics*. 1993;14(3): 349-367
- [28] Wodniecka Z, Craik FI, Luo L, Bialystok E. Does bilingualism help memory? Competing effects of verbal ability and executive control. *International Journal of Bilingual Education and Bilingualism*. 2010;13(5):575-595
- [29] Rodriguez YG. The effects of bilingualism on cognitive development. (EdD, ProQuest Information & Learning/Temple University). *Dissertation Abstracts International*. 1992;53 (4-A):1104
- [30] Schweizer S, Adam H, Tim D. Extending Brain-Training to the Affective Domain: Increasing Cognitive and Affective Executive Control through Emotional Working Memory Training. <https://doi.org/10.1371/journal.pone.0024372>
- [31] Craik FIM, Bialystok E, Freedman M. Delaying the onset of Alzheimer's disease: Bilingualism as a form of cognitive reserve. *Neurology*. 2010;75(19):1726e1729
- [32] Chertkow H, Whitehead V, Phillips N, Wolfson C, Atherton J, Bergman H. Multilingualism (but not always bilingualism) delays the onset of Alzheimer's disease: Evidence from a bilingual community. *Alzheimer Disease and Associated Disorders*. 2010;24(2):118e125
- [33] Haynes RB, Jeffery RA, Keepanasseril A, Wilczynski NL, Navarro-Ruan MRA, et al. Methods for trials of interventions to enhance patient adherence to medication prescriptions, based on a systematic review of recent randomized trials. *Clinical Research Trials*. 2015;1:20-25. DOI: 10.15761/CRT.1000106
- [34] Ellis C, Lindrooth RC, Horner J. Retrospective cost-effectiveness analysis of treatments for aphasia: an approach using experimental data. *American Journal of Speech-Language Pathology*. 2013: epub. PubMedID. 24105475. DOI: 10.1044/2013\_AJSLP-13-0037
- [35] Dickinson D, McCabe A, Clark-Chiarelli N, Wolf A. Cross-linguistic transfer of phonological awareness in low-income Spanish and English bilingual children. *Applied PsychoLinguistics*. 2004;25:323-347. <http://dx.doi.org/10.1017/S0142716404001158>
- [36] Dickinson DK, Chaney C. *Early Phonological Awareness Profile*. Newton, MA: Education Development Center; 1997a
- [37] Dickinson DK, Chaney C. *Emergent Literacy Profile*. Newton, MA: Education Development Center; 1997b

- [38] Abutalebi J, Annoni JM, Zimine I, Pegna AJ, Seghier ML, Lee-Jahnke H, Lazeyras F, Cappa SF, Khateb A. Language control and lexical competition in bilinguals: An event-related fMRI study. *Cerebral Cortex*. 2008;**18**:1496-1505. DOI: 10.1093/cercor/bhm182
- [39] Barac R, Bialystok E. Bilingual effects on cognitive and linguistic development: Role of language, cultural background, and education. *Child Development*. 2012;**83**(2):413-422
- [40] Cook VJ. The poverty-of-the-stimulus argument and multicompetence. *Interlanguage Studies Bulletin (Utrecht)*. 1991;**7**(2):103-117
- [41] Cook VJ. Evidence for multicompetence. *Language Learning*. 1992;**42**(4):557-591
- [42] Kessler C, Quinn ME. Language minority children's linguistic and cognitive creativity. *Journal of Multilingual and Multicultural Development*. 1987;**8**:173-186
- [43] Baker C. Foundations of bilingual education and bilingualism. (Vol. 27). In: *Multilingual Matters*. Buffalo, Toronto: Clarendon; 2003
- [44] Cook VJ. Using the first language in the classroom. *Canadian Modern Language Review*. 2001;**57**(3):402-423
- [45] Horn L, Kojaku LK. High School Academic Curriculum and the Persistence Path through College: Persistence and Transfer Behavior of Undergraduates 3 Years after Entering 4-Year Institutions (NCES 2001-163). Washington, DC: National Center for Education Statistics; 2001
- [46] Curtain HA, Dahlberg CA. *Languages and Children, Making the Match: New Languages for Young Learners*. Allyn & Bacon; 2004
- [47] Keshavarz MH, Astanch H. The impact of bilinguality on the learning of English vocabulary as a foreign language (L3). *International Journal of Bilingual Education & Bilingualism*. 2004;**7**(4):295-302. DOI: 10.1080/13670050408667814
- [48] Murphy S. Second language transfer during third language acquisition. Teachers College, Columbia University Working Papers in TESOL & Applied Linguistics. 2003;**3**(1):1-21
- [49] MacWhinney B. A unified model. In: Elias NC, Robinsons P, editors. *Handbook of Cognitive Linguistics and Second Language Acquisition*. Mahwah, Nj: Lawrence Erlbaum Associates; 2007. pp. 341-371
- [50] Nayak N, Hansen N, Krueger N, McLaughlin B. Language-learning strategies in monolingual and multilingual adults. *Language Learning*. 1990;**40**(2):221-244
- [51] Grosse CU. The competitive advantage of foreign languages and cultural knowledge. *The Modern Language Journal*. 2004;**88**(3):351-373
- [52] Marian V. Language-dependent memory. In HAHN, Martín; STONESS, Scott C. *Proceedings of the twenty-first annual conference of the Cognitive Science Society*. Lawrence Erlbaum Associates; 1999
- [53] Yehene E, Meiran N. Is there a general task switching ability? *Acta Psychologica*. 2007;**126**:169-195. <http://dx.doi.org/10.1016/j.actpsy.2006.11.007>

- [54] Chumbow BS. Towards a Language Planning Model for Africa. *Journal of West African Languages*. 1987;**17**(1):51-69
- [55] Fantini AE, Arias-Galicia F, Guay D. *Globalization and 21st Century Competencies: Challenges for North American Higher Education*. Western Interstate Commission for Higher Education; 2001
- [56] Costa A, Santesteban M, Ivanova I. How do highly proficient bilinguals control their lexicalization process? Inhibitory and language-specific selection mechanisms are both functional. *Journal of Experimental Psychology: Learning, Memory, and Cognition*. 2006;**32**(5):1057-1074. DOI: 10.1037/0278-7393.32.5.1057
- [57] Chumbow BS. *Language and Knowledge Production in the Age of knowledge Economy*. Paper presented at the World Humanities Conference, Liege, Belgium, 5-12 August 2017; 2017a
- [58] Di Paolo A, Tansel A. Returns to foreign language skills in a developing country: The case of Turkey. *The Journal of Development Studies*. 2015;**51**(4):407-421
- [59] Williams DR. Multiple language usage and earnings in Western Europe. *International Journal of Manpower*. 2011;**32**(4):372-393
- [60] Fishman JA. Bilingualism with and without diglossia: Diglossia with and without bilingualism. *Journal of Social Issues*. 1967;**23**:29-38
- [61] Fishman JA. Bilingualism and biculturalism as individual and as societal phenomena. *Journal Multilingual and Multicultural Development*. 1980;**1**:3-15
- [62] Chumbow BS. The African academy of languages and the continental language development Programme. In: Christina T, Legere K, editors. *North-South Contributions to Africa Languages*. Koln: Rudiger, Koppe, Verlag; 2011
- [63] Chumbow BS. The Challenge of Diversity and Pluralism: The Tier Stratification Model of Language Planning in a multilingual Setting. In: Lopez-Varela A. editor. *Social Sciences and Humanities: Applications and Theory*. Vol.1. Rijeka: INTECH Publications; 2012a
- [64] Chumbow BS. Towards a framework for language Laws and Language charters in Africa. In: Claudine B et al, editors. *Law, Language and the Multilingual State*. University of the Free State: Sunmedia Publications; 2012c. p. 2012
- [65] Lijphart A. *Conflict and Coexistence in Belgium: The Dynamics of a Culturally Divided Society* (No. 46). Berkeley, CA. University of California Press; 1981
- [66] Billigmeier RH. *A Crisis in Swiss Pluralism*. Oxford: Holdan Books; 1979
- [67] Klode G. Language contact and bilingualism in Switzerland. In: Paulston CB, editor. *International Handbook of Bilingualism and Bilingual Education*. Westport, CT: Greenwood Press; 1988
- [68] Simons GF, Fennig CD, editors. *Ethnologue: Languages of the World*. 20th ed. Dallas, Texas: SIL International. Online version; 2017. <http://www.ethnologue.com>

- [69] European Commission. Green Paper - Migration & mobility: challenges and opportunities for EU education systems, COM(2008) 423. Brussels: European Commission; 2008a
- [70] Council of the European Union. Council conclusions on language competences to enhance mobility. Official Journal of the European Union, C. 2010;372:27-30
- [71] Grin F, Sfreddo C, Vaillancourt F. The Economics of the Multilingual Workplace. London: Routledge; 2010
- [72] Bamford KW, Mizokawa DT. Additive-bilingual (immersion) education: Cognitive and language development. *Language Learning*. 1991;41(3):413-429
- [73] European Commission. Multilingualism: An Asset for Europe and a Shared Commitment, COM (2008) 566 Final. Brussels: European Commission; 2008b
- [74] Moore P. Collaborative interaction in turn-taking: A comparative study of European bilingual (CLIL) and mainstream (MS) foreign language learners in early secondary education. *International Journal of Bilingual Education and Bilingualism*. 2011;14(5):531-549
- [75] Nieto S. *The Light in their Eyes: Creating Multicultural Learning Communities*. New York: Teachers College Press. Creating and Digitizing Language Corpora. Palgrave Macmillan, London; 1999
- [76] Cummins J. *Language, Power, and Pedagogy: Bilingual Children in the Crossfire* (Vol. 23). *Multilingual Matters*; 2000
- [77] Garamone J. Official details foreign language program's progress. American Forces Press Services, U. S. Department of Defense press release, July 2, 2010. Retrieved from: <http://www.defense.gov/news/newsarticle.aspx?id=59880>
- [78] Simire G. Developing and promoting multilingualism in public life and society in Nigeria. *Language, Culture and Curriculum*. 2003;16(2):231-144
- [79] Wee L. 'Burdens' and 'handicaps' in Singapore's language policy: On the limits of language management. *Language Policy*. 2010;9(2):97-114
- [80] Chumbow BS. Which language for African literature? Language of the head or language of the heart? Keynote at the 24th pan-African writers conference, Accra, Ghana, November 05-08, 2017. 2017b
- [81] Gazzola M, Grin F. Is ELF more effective and fair than translation? An evaluation of the EU's multilingual regime. *International Journal of Applied Linguistics*. 2013;23(1):93-107
- [82] Gazzola M. *The Evaluation of Language Regimes: Theory and Application to Multilingual Patent Organisations*. Amsterdam: John Benjamins; 2014