Language, education and identity in Africa

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5. Rational choices for Language in Education

In chapter 4 I have outlined the reasons why in future, it will become necessary to make more use of African languages in secondary and higher education. I have proposed a new pair of concepts, namely the distinction between discerned languages – spoken languages as identified for example by the Ethnologue – and designed languages – the standardized forms that have been developed for some languages.
This chapter builds on the material of the previous chapters and examines the last of my research questions: what possibilities are there for rational language-in-education policies in Africa?

5.1 Language policy and citizenship

Mamdani, in his landmark 1996 book 'Citizen and Subject' has decisively influenced how the word 'citizen' must be interpreted in an African context. Citizens are people who are enabled to participate in democratic decision making – subjects are not. However, this understanding is not specifically African. Smith (2013) uses the similar notion of 'meaningful citizenship', derived from the works of Charles Tilly and James Tully and asserts that 'the analytical lens of citizenship has rarely been deployed in many parts of the developing world.' (p. 19) In chapter 1.5, I pointed to the notion of 'republican citizenship' as used by Grotenhuis (2016) to denote the importance of how people as citizens feel they are part of a 'nation', rather than only being subjects of a 'state'. All agree that citizenship implies access to information and to political discourse in a language that is accessible to the citizen. In this context, Heugh (2014) has used the term 'linguistic citizenship'. It is good to note that this is not only a linguistic issue, though: it is also a cultural issue. Teaching and learning are affected not only by the medium of instruction, but also by the cultural backgrounds of teachers and learners.[1] Thus, it is easier if teachers and learners share a similar cultural background, or at least are knowledgeable about those backgrounds. This is of course more likely to happen if teachers and learners share the same linguistic background as well.
In the colonial period, the language of administration was the colonial language and this was fine, because the colonial authorities never had any intention of giving access to the administrative, court or political systems to ordinary people – in Mamdani's terms, the ordinary people

[1] For an overview, see Hofstede (1986).

were subjects, not citizens. With independence and democracy, this changed, at least notionally. The aim became that all citizens have access to the state institutions meant to service them. If those institutions function in a national language, then all citizens should be given access to that national language. Albaugh (2014) points out that in Europe, the reasons for developing and enforcing national languages were not primarily moral ones. She points to the differences in state building between Europe and Africa. In Europe, rulers needed to tax their citizens (for which a common language was useful) and they needed to wage war and therefore needed large conscription armies (for which a common language was also useful). This was also good for industrialization. Albaugh demonstrates that in Africa, citizens are hardly taxed: tax comes from trade tariffs. In addition, the colonial borders are secure, so large armies are not needed. Therefore, a common language is less necessary and the fiction of the colonial language as 'unifying' may be useful and in the meantime, keeping people divided by using local languages may be useful as well, in addition to safeguarding the rift between elite and population. Alamin Mazrui (2019: 432) points out how in general, this process does lead to a slow decline in general proficiency in the ex-colonial languages. He also points to the undemocratic character of using a national language that the majority does not have direct access to, calling this 'denial of voice' (p 434), similar to the reasoning of Smith (2013). Chaudenson has sharply criticized existing educational arrangements in Africa and has shown how universal access to the national language has remained fictional: teaching methods are inadequate, the change from local languages to French generally happens too soon, there is no assessment of actual levels of language learning reached and where there are such assessments they generally show that the levels reached are dismally low for most children. However, instead of concluding that the project should be abandoned, Chaudenson goes the other way: he says much more needs to be done if children are to be brought up as effective citizens who have access to the national language. Measures he proposes include better language teaching, but his main plea is for a far greater exposure of children to French through the media, for example through TV programmes aimed at helping children to learn French in a playful and attractive manner.

This brings us back to De Swaan (2001), who has pointed how choices that may be rational from an individual point of view may lead to less desirable results from a social point of view.

In general, language learning is helped by starting early, by greater exposure to a language in many different ways, by greater time investment, by higher motivation (both on the part of children and of

parents) and by a better basis in the mother tongue. However, all of this represents choices that reflect on the one hand preferences by individual parents but on the other hand replicate existing social inequalities. In general, the extent to which parents have access to these different strategies for helping language learning is different for different social strata (although there are individual differences as well).
For certain areas of Africa, it is important to take into account that multilingualism is prevalent. Many people speak two or even more languages, a point emphasized by Lüpke and Storch (2013). Dorvlo (2008: 6) has studied children who have Logba as their mother tongue in Ghana. This is a small language, spoken in an area where another, larger language (Ewe) is dominant. This means that in fact all Logba-speaking children are exposed to Ewe from their earliest days and can be considered bilingual from birth. It is good to note that in general, multilingualism is an advantage: Barac and Bialystok (2012) have shown that multilingual children perform certain tasks more quickly and more easily than monolingual children.[2] This is a situation that may occur for more people in Africa and that could help in devising equitable language policies.
Buzási (2016) has developed the Index of Communication Potential, based on information on second- and third-language knowledge taken from the Afrobarometer survey. She shows that there are several countries in Africa where the former colonial language could be dropped without any major loss to the potential of people in those countries to communicate with one another. However, this is not a general situation in all countries of Africa. Furthermore, the fact that people have a certain linguistic repertoire in more than one language may overlook the issue of at which level people can express themselves in these different languages. Some African authors have a tendency to extoll the multilingual virtues of Africans. Of course multilingualism *is* a resource, but we should not be blinded to the fact that many multilingual Africans may only have restricted repertoires in each of their many languages, suitable only for the different domains in which they speak (not: read or write) each one of them. An example of this type of reasoning is Bokamba (2014). Wolff (2016: 227) points to the problem of 'semilingualism', or insufficient competence in any language. Piller (2016: 124) uses the more emotive but, in my view, clearer term of 'linguistic stunting'. In addition, it is an open question what multilingualism may mean for intergenerational language transmission; could it be that multilingualism in some situations is actually an early indicator of intergenerational language loss?

[2] I am grateful to Dr Azeb Amha for pointing this out to me.

In other parts of the world, the benefits of multilingualism have been pointed out. Grin (2003) looks at multilingualism in education in Western countries, notably Canada and Switzerland and tries to employ an economic analysis. One of his conclusions (p39) is: 'The application of basic economic concepts then suggests that society is likely to be best off not when it tries to eliminate diversity, nor when it attempts to embrace limitless diversity.' He sees economic benefit in learning more than one language and feels the cost is moderate (p 54):

'in certain contexts, moving from a unilingual to a bilingual school system means that pupils will be able to get education in a language that they understand well, instead of a language that they understand poorly. This has the following effects:

- a decline in the repetition rate (children taking the same class twice because of failing grades), which entails a reduction in costs;
- a decline in the dropout rate (children leaving the system because of failing grades), which entails an increase in costs;
- better results in terms of cognitive acquisition, entailing higher productivity and ultimately

a more prosperous economy and higher tax revenue.'

For Switzerland, he shows that the extra earnings associated with foreign language knowledge increases with level of fluency. However, these increases are not the same for every part of the country, nor for both genders.

Now, let us suppose for a moment that social inequalities would not exist. Even in a world of perfect equal opportunity, language learning outcomes will be unequally divided over the population, due to differences in language aptitude that are a common feature of any human population. In fact, this is the narrative that is common to all soft power exercised through meritocratic discourse: those who are better off are better off not because of any injustice, but because they deserve it in reward for their God-given talents.

A rational language policy that aims at being decolonial will be based on creating equal opportunities for all children, and creating equal access to state institutions and to political debate for all citizens, regardless of their socio-economic status. On what principles should such a policy be based? This is explored in the next section.

5.2 Principles underlying rational language policies

Language policy is important: as Smith (2013: 94) points out, one 'of the most basic and central aspects of our daily life is choreographed by the

state, regardless of whether an official language policy is formally articulated or left implied.' What is more, 'there are significant democratic costs to ignoring language diversity or pursuing a policy of linguistic domination.' (p 118). She points out that any language policy needs to deliver three types of political goods to its citizens (p 95/6):

1. Access to information: 'A democratic language policy, whatever we decide that is, should provide all citizens equal access to the information, education, and opportunities of all others, following the principle of equality.
2. Autonomy: A number of multiculturalist theorists have identified autonomy as a prerequisite for democratic participation. This means that citizens must have not only the freedom to make their own choices, but also what scholars generally refer to as a sufficiently wide range of meaningful options and opportunities from which to choose.'
3. Recognition, as symbolic affirmation of citizen identity.

Skuttnab-Kangas (2013: 82) goes further than Smith, stating that the way people who use 'indigenous, tribal, minority and minoritised (ITM)' languages are taught constitutes a violation of human rights and can even be called a form of genocide and a crime against humanity. Unlike De Swaan, she feels 'that linguistic diversity and biodiversity are correlationally and causally related.' (p 114). Roy-Campbell (2019: 40) asserts: 'As long as African countries continue to educate the continent's future leaders primarily through foreign languages, they will remain dependent.'

Obviously, the political goods mentioned by Smith are often not delivered by language policies currently pursued in Africa. In fact, Africa is not unique in this. Reviewing examples from six countries in four continents, Taylor-Leech and Liddicoat (2014: 358) conclude that 'when language planning flows from top-down, centralised, non-consultative decision making motivated by political pragmatism, it invariably results in unsatisfactory provision'. However, 'When planners are motivated by the desire (..) to promote social inclusion, tolerance, and/or cultural integration, the resulting programmes and provision can be beneficial'. What does that mean for education?

In the previous chapter, we have argued that education in Africa is still largely based on the colonial model, which was highly selective: it is aimed at servicing primarily those children who are gifted in language. A number of these children will also be gifted in mathematics; those children gifted in mathematics but not gifted in language will face difficulties. The system disregards those children not particularly gifted in either language or mathematics. By expanding educational systems

based on the colonial model, they have become inefficient and wasteful, both in terms of resources (spending money to teach children in ways not suited for them) and in terms of talent (not making the best use of the talents of the majority of a nation's children). The World Bank (2019: 17) gives a stark statistic: in sub-Saharan Africa, no fewer than 87% of ten-year old children suffer from 'learning poverty', as opposed to under 10% for children in high-income countries. Systems based on the colonial model are wasteful; furthermore, they tend to reproduce and accentuate existing inequalities in society, favouring the urban and already well-to-do.

In order to get away from this, a different approach is needed, one that starts not from the needs of an intellectual elite but from the needs of the population as a whole. Put in another way, instead of conceiving the 'educational pyramid' in a top-down way, it has to be thought through in a 'bottom-up' way.

But what can that mean in practice and what does it mean from the language point of view?

A first issue that needs to be explored is the issue of which languages to use. Many policy makers and scientists have tried to wriggle out of this problem by saying that all languages should have equal status, without necessarily enumerating those languages; some also say that the same institutional support currently given only to the former colonial language should be extended to 'all' indigenous languages, without saying which. This what the African Union has done by designating 'any' African language as 'official'.[3] Ndhlovu (2015: 188), influenced by Pennycook, is against seeing languages as 'countable objects' altogether and argues for basing policy on 'ignored lingualisms', without becoming more concrete. Kamwangamalu (2016) and others shy away from the problem: they simply do not pronounce themselves on it. However, if such statements are made without becoming more concrete, the net effect is likely to lead to a strengthening of the position of the former colonial languages. The distinction between discerned and designed languages as outlined in section 4.1.2 can be helpful in overcoming this type of disempowering language discourse.

In line with the concepts of discerned and designed languages, the **first principle** that I would propose is that it will be necessary to develop a **limited number** of designed languages for education. This idea was suggested already by Chumbow (2005: 177) and also by Brock-Utne

[3] https://au.int/en/about/languages accessed 20 July 2019.

(2017). It is not practical, but also not necessary, to aim to develop all discerned languages into designed languages.

The **second principle** that I would propose follows from the first: these designed languages should be chosen in such a way that they are **easy to learn** for as many speakers of discerned languages as possible – a principle that was already suggested by Nwoye (1978), as cited by Laitin (1992: 154).

As a complement to the second principle, the **third principle** would be to strive for **inclusivity**, in other words, to choose the various designed languages in such a way that, as much as possible, all have to exert a relatively low but relatively equal effort to learn them.[4] Thus, for speakers of Occitan, standard French might be relatively easy to learn as a designed language. For speakers of lower Saxon, standard German might serve the same purpose. Using standard German as the designed language for speakers of Occitan would place them at a disadvantage compared to the speakers of lower Saxon. Therefore, both French and German are needed in order to ensure inclusivity. Another strategy is thinkable: mandarin Chinese could be chosen as the designed language for both groups, which would make learning extremely but equally difficult for both. Such a strategy would be very damaging to France and to Germany, because it would effectively bar large sections of the population from gaining access to meaningful education and to public discourse and would therefore stunt the possibilities of both countries for economic and social development. Of course, this is precisely the strategy that is currently presented as the only rational alternative for many African countries. It is not what I propose.

Lastly, a **fourth principle** seems appropriate: namely that of making use of **existing bilingualism** as a resource. Multilingualism in Africa should be seen as a resource to be mobilized to advantage. As hinted to above, this is probably useful only for a minority of cases: true bilingualism is difficult to achieve and depends on significant exposure to the two languages from a very early age. However, there may be areas where this exists. There could be situations where finding an easy to learn

[4] This principle is related to the second principle of what a multicultural state should look like, as described by Kymlicka (2003: 150). This entails the requirement that all citizens should have equal access to state institutions, without linguistic barriers imposed on some but not on others: 'The state accepts an obligation to accord the history, language and culture of non-dominant groups the same recognition and accommodation that is accorded to the dominant group.'

designed language for discerned language 'A' is difficult or impractical, but if those children also speak language 'B' it might be possible to find a cost-effective, inclusive solution.
Broadly speaking, the results of any system of education can be improved in two ways: by increasing the funding available to it and by improving the methods used in education / reducing the inefficiencies in the system. Applying the principles outlined above should go a long way towards improved methods and reduced inefficiency and wastage in education. They should also lead to a better use of African talent and therefore contribute to a society that offers chances for a productive and rewarding life for all of its citizens.
In this chapter, I want to explore the idea that it should be possible to arrive at rational choices for language in education, based on designed languages that are easy to learn for all. [5] Using these languages will help in regaining cultural autonomies as discussed in earlier parts of this study.

5.3 Which languages are easy to learn?

The first and second of the proposed principles hinge on the availability in Africa of designed languages (or languages that can become designed) that are easy to learn for speakers of several discerned languages.
As a thought experiment, one could make for any language a matrix of surrounding languages, more or less like this:

La - medium	Lb - easy	Lc -easy
Ld - medium	L1	Le -hard
Lf - medium	Lg - medium	Ln - hard

[5] The ideas for the next section were first presented at the ECAS19 Conference in Edinburgh, UK, from 11 to 14 June 2019. A slightly different and abridged version of sections 5.3 and 5.4 has been published in Pinxteren, Bert van (2020b: 137-143).

(Of course, in reality, in many situations the 'borders' around these language boxes will be fuzzy to a greater or lesser extent.) A similar matrix could be prepared for La, Lb, Lc etc. This might lead to what would theoretically be the best choices for any African country for designed languages to use as medium of instruction: those languages that present the least difficulties for the largest numbers of speakers. So in the end, one would end up with a limited list of designed languages best suited for use in education and with an estimate of the number of L1 and (potential) L2 speakers of those languages. It might be that there are some communities speaking language isolates where bilingualism is not frequent and that have only a small number of speakers – but then at least we will know the size of that problem, which is likely to affect only a very small percentage of all Africans.

Of course, the actual language choice will depend on many criteria in addition to what would theoretically be best if one would follow this model. However, this model would provide additional information relevant for making an informed choice, information that is currently lacking. Note that this approach is a departure from the idea that language choices could be based on looking for 'mutual intelligibility', as advocated for example by Prah. As outlined in chapter 1.3, the concept of mutual intelligibility itself is difficult if not impossible to operationalize. But in addition, once we admit that learning a designed language always requires a certain amount of formalized learning, it becomes thinkable to choose designed languages that are not mutually intelligible for speakers of the discerned languages they serve, but that are nevertheless easy to learn.

But how can we know if a language is 'easy'? How can that term be operationalized?

The literature on language learning is fairly clear about the general principle: languages that are close to one another are easier to learn than languages that are very different from one another. In other words, the **distance** between any two languages can be taken as an indicative or rough measure for how easy or difficult it may be to learn another language for a speaker of a given language.

The measure of linguistic distance as indicator of easy or difficulty of language learning has advantages, as will be shown further down in this chapter, but it also has limitations. Thus, the relationship is not necessarily bidirectional: it may be easier for somebody who speaks language A to learn language B than it is for a speaker of language B to learn language A. This can happen for example if language A has more sounds (phonemes) than language B and there are no sounds in language B that do not also occur in language A. In that case, speakers of language B will have to familiarize themselves with the new sounds

that language A has, but speakers of language A do not have that problem if they want to learn language B. The same can be true for the grammar of a language: if language A has a more difficult or strict grammar than language B, it may be easier for speakers of language A to learn language B than vice versa. Other factors influence ease of language learning as well, such as for example the *perceived* ease or difficulty, as related for example to the relative status of the languages involved – for an overview, see Gooskens (2018).

Then, there are various ways of measuring the distance between languages, all of them with their own problems and imperfections. Ginsburgh and Weber (2016) give a useful overview of ways that have been found of measuring linguistic distance.[6]

One way they describe is by comparing languages in terms of their relatedness to a common ancestor, starting from the idea that there once existed one language and that all existing languages have branched off from that common root. By counting the number of 'branchings', the distance between languages can be computed, in the same way that family distances are traced through the distance from a common ancestor. This is often called *cladistics* (Ginsburgh and Weber, p 142).

Another way of measuring distance between languages is through */exicostatistical* methods. These methods are based on measuring the common roots of words in the vocabularies of various languages. These are based on a limited list of words that are assumed to exist in almost all languages with the same meaning. The most famous of these lists is the one developed by the American linguist Swadesh, last published in 1971. Levenshtein (1966, cited in Ginsburgh and Weber 2016: 148) has suggested a way of using these word lists for comparing distances between languages by computing the number of changes that need to be made to turn one word (such as the English word 'night', but spelled phonetically) into its equivalent in another language (such as 'nuit' in French, also spelled phonetically).

The cladistic method has the advantage of taking into account more than just vocabulary. However, it relies on a classification of language families that is imprecise at best and therefore gives only very rough results (p 149) (see also Dimmendaal, 2019 for a critical discussion of genealogical models of language differentiation).

The most precise and most comprehensive tool for computing language distance currently available uses a lexicostatistical method with a simplified 40-item word list derived from the Swadesh list and

[6] See Schepens, van der Silk and van Hout (2013) for convincing research on the relevance of linguistic distance for the achievement levels of learners of Dutch.

using Levenshtein distances, also known as Normalized Edit Distances (NED). As Gooskens et al (2008) have shown for Scandinavian languages, Levenshtein distances provide a good indicator of mutual intelligibility. An early attempt at using this approach for Cameroonian languages can be found in Chumbow et al (2007). Moran and Prokić (2013) give a useful overview of how Levenshtein distances have been used extensively in a variety of other situations and use it themselves for a classification of Dogon languages. Building on the Swadesh list and the Levenshtein distances, Wichmann, Holman and Brown have developed the Automated Similarity Judgment Program (ASJP) and its associated database, started in 2008.[7] It was developed in an experimental way and its results were compared with the expert knowledge of relevant linguists and refined based on their feedback. The ASJP database currently contains word lists from 5,067 discerned languages[8] and is able to compute the degree of similarity between any pair of these language, yielding for each pair a distance measure they call the Levenshtein Normalized Distance Divided (LDND).[9] To give credit to their work, I will call this the ASJP distance.

As Ginsburgh and Weber point out (p 152), it would be better to have a system that is based on how much time it would take an average speaker of one language to learn a given other language. They cite the work of Chiswick and Miller from 2007, who developed such a measure for a limited number of language pairs. However, they also point out that it would be almost impossible to do this for all possible language pairs in the world. Therefore, in order to continue with the thought experiment and to show that it in principle it should be possible to make rational choices in this area, I will continue, using the ASJP database as a starting point in order to provide indications of ease or difficulty of language learning.

5.4 Ease of language learning: the ASJP database

So far, Levenshtein distances have been used to classify languages and dialects and to estimate degrees of mutual intelligibility. However, I

[7] https://asjp.clld.org/ accessed 23 July 2019.

[8] ASJP website, 23 July 2019. Note that SIL is the registrar for an ISO norm that tries to list all of the world's languages, ISO 693-3; this can be seen as listing all the more than 7,000 currently discerned languages of the world. See https://iso639-3.sil.org/about for more information.

[9] See https://en.wikipedia.org/wiki/Automated_Similarity_Judgment_Program for a brief explanation (accessed 18 September 2020).

propose to use them for a related but different purpose, namely to estimate the ease or difficulty of language learning. Without further work it is unclear what the ASJP distances mean in terms of ease or difficulty of learning a language. In order for them to have practical relevance for this purpose, it is necessary to benchmark them against a schema for language learning and to see if there is any relationship between the ASJP scores and such a schema. The schema I propose to use is one that has been developed by the US Government.[10] It has published a list of language pairs, giving for each the number of weeks of full-time formal instruction needed for a talented native English speaker to reach the IRL S-3/L-3 proficiency level in a given other language. The S3/R3 level is equal to basic 'vocational' proficiency, roughly equivalent to the CEFR C1 level.
In some cases, it also gives the number of weeks needed to give a student who already speaks a certain language the same level in a related language.
The mapping looks like this:

Language pair	**Weeks**	**US classification**	**ASJP score**	**My classification**
Czech – Slovak	10-12	Closely related	32	Very easy
Bulgarian – Macedonian	10-12	Closely related	32	Very easy
Indonesian –	10-12	Closely related	15	Very easy
Lao – Thai	14-18	Related	53	Very easy
Portuguese – Spanish	14-18	Related	68	Easy
Dutch – German	18-22		49	Very easy
Bulgarian – Serbo-Croatian	30-36		48	Very easy
English – Dutch	24	Cat I	61	Easy
English – Italian	24	Cat I	90	Medium
English – French	30	Cat I	92	Medium
English – German	36	Cat II	69	Medium
English – Haitian	36	Cat II	94	Medium
English – Swahili	36	Cat II	97	Difficult

[10] https://2009-2017.state.gov/documents/organization/247092.pdf accessed 21 July 2019. Cysouw (2013) has used a slightly less complete of this schema before to assess ease of language learning, but he has not related it to ASJP scores.

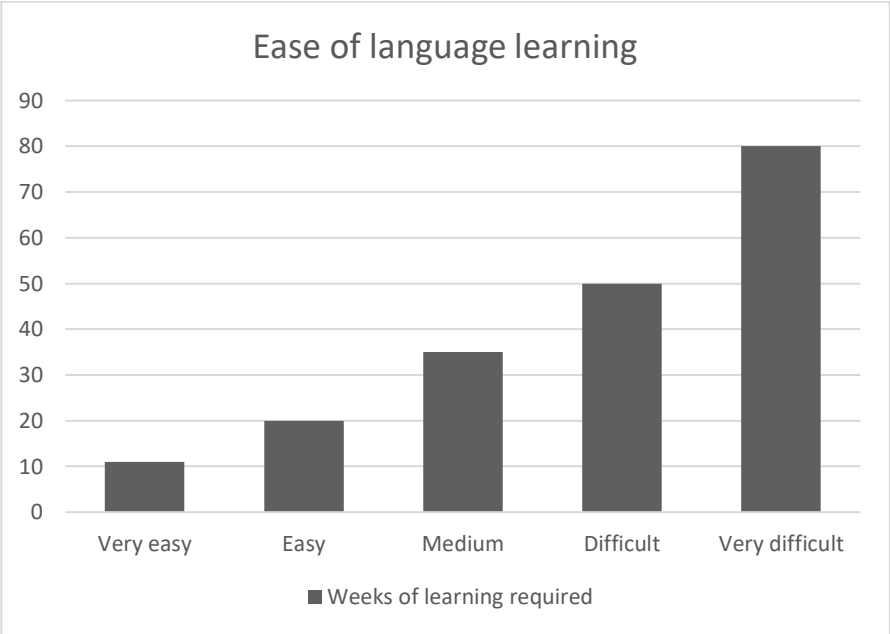
English – Amharic	44	Cat III (hard)	96	Difficult
English – Hausa	44	Cat III (hard)	98	Difficult
English – Somali	44	Cat III (hard)	103	Very difficult
English – Japanese	88	Cat IV (super hard)	98	Difficult
English – Korean	88	Cat IV (super	99	Difficult
English –	88	Cat IV (super	102	Very difficult

Table 1: US and ASJP-derived schemas for language learning

As is clear from the table, the US Government-based classification and my classification based on AJSP scores do not provide an exact match, but they are still reasonably close. The difference between the two systems is never more than one adjacent category. What is also clear is that the ASJP scores do not form a scale with equal distances between points: at the higher end of the scale, the difficulty level increases faster than at the lower end of the scale. This is in line with Heeringa (2004: 281), who concludes that 'logarithmic Levenshtein distances (…) correlate most strongly with the perceptual distances'.
In summary, my classification goes like this:

ASJP distance	**Category**
< 60	Very easy
≥ 60, < 90	Easy
≥ 90, ≤ 95	Medium
> 95, < 100	Difficult
≥ 100	Very difficult

It is good to note that the difference in language learning between 'easy' and 'difficult' represents a substantial difference in terms of the effort that is required. The graph below illustrates this, although the number of weeks should be taken as an indicative value only. In addition, this is based on language learning of US adolescents. It could be that the differential is different for African children – this is an area that has not been researched and would deserve further work. It could also be that the differential varies for people with varying language aptitudes.



Graph 1 – Ease of language learning

We can tentatively operationalize the second principle proposed in section 5.1 above (the principle that the designed languages chosen as medium of instruction) should be as close as possible to the discerned language of the learners) then as follows: ideally, the designed language of instruction should be very easy (ASJP score of below 60). In cases where this is not practical, the next best choice would be to provide instruction in a different designed language that is less close to the mother tongue but that is still easy to learn – so with an ASJP score of below 90. The ASJP score for the English-Estonian language pair (used in chapter four) is 99, making English a difficult language for Estonian speakers (and vice versa). In cases where this is practical and convenient, it may be possible to start primary education in a very easy language and to teach a second, easy to learn language as a subject. At some point in time, it may then be possible to switch to this second language as medium of instruction – as indeed suggested by Laitin and discussed more in detail below.

This benchmarking and categorization has the advantage that it leads to an approximate assessment for the easy or difficulty of learning a language for any language pair in the ASJP database. It can therefore be used in order to make a rough assessment of the equitableness and inclusivity of a given language regime and of the efficiency of developing a given discerned language into a designed language. This

can be done without any knowledge of the actual languages. However, it is not more than that: any initial assessment of this type would have to be validated against the expert knowledge of local speakers and learners of the languages involved.

To illustrate the power of this approach, two examples will be given, one from Africa and one from Europe.

First, let's examine the Gbe languages, spoken in Ghana, Togo, Benin and Nigeria. Prah (1998) has claimed that Gbe is really one language. The ASJP database has sufficient word lists for six discerned Gbe languages. As can be seen from table 2 below, most language pairs are 'very easy'; some of them are 'easy'. Developing either Aja Gbe or Wudu into a designed language might yield a designed language that is very easy to learn for all speakers of Gbe languages.

2 SYNONYMS, AT LEAST 28 WORDS						
LOANWORDS EXCLUDED						
LDND						
	ADANGBE	AJAGBE	EWE ADANGBE	FONGBE	GEN	WUDU
ADANGBE	0					
AJAGBE	37	0				
EWE ADANGBE	17	41	0			
FONGBE	66	57	67	0		
GEN	36	41	40	63	0	
WUDU	24	30	21	60	30	0
	ADANGBE	AJAGBE	EWE ADANGBE	FONGBE	GEN	WUDU

Table 2: ASJP database output for Gbe languages

For those readers who have a more Eurocentric frame of reference, it is illustrative to compare this output with the results for the 10 Dutch-like languages discerned in the Netherlands (plus English) for which there are sufficient word lists in the ASJP database. As can be seen from table 3 below, Dutch is very easy to learn for all speakers of Dutch-like languages (whereas English is marginally more difficult, falling into the 'easy' category). It makes sense that in the Netherlands, Dutch is used as the designed language. It also explains why Dutch are often praised for their generally good command of the English language – it is an easy language for them to learn.

2 SYNONYMS, AT LEAST 28 WORDS											
LOANWORDS EXCLUDED											
LDND											
	BRABANTIC	DUTCH	ENGLISH	FRANS VLAAMS	FRISIAN WESTERN	GRONINGS	LIMBURGISH	SALLANDS	TWENTS	WEST VLAAMS	ZEEUWS
BRABANTIC	0										
DUTCH	44	0									
ENGLISH	66	61	0								
FRANS_VLAAMS	43	38	61	0							
FRISIAN_WESTERN	57	52	67	59	0						
GRONINGS	58	38	71	58	56	0					
LIMBURGISH	54	46	66	57	58	44	0				
SALLANDS	61	35	69	50	62	40	54	0			
TWENTS	63	47	63	59	64	48	55	37	0		
WESTVLAAMS	50	43	64	29	65	55	56	48	60	0	
ZEEUWS	47	37	67	27	61	51	56	48	59	34	0
	BRABANTIC	DUTCH	ENGLISH	FRANS VLAAMS	FRISIAN WESTERN	GRONINGS	LIMBURGISH	SALLANDS	TWENTS	WEST VLAAMS	ZEEUWS

Table 3: ASJP database output for Dutch-like languages

This categorization also helps provide a nuance to Laitin's proposal of rational language repertoires for Africa (Laitin 1992: 18). He predicts that in a small number of African countries, there will be one national or official language – these will be the countries that are largely monolingual, such as Botswana, Somalia and Madagascar. Some other countries, in his opinion, will move towards two languages: indigenous languages for use within each linguistic community and an international language for nationwide communication; these countries would include Angola and South Africa, for example. However, according to Laitin, most countries in Africa will move towards what he calls the 3 ± 1 model: a local indigenous language (used in primary education), an indigenous lingua franca and an international language. For those whose mother tongue is the lingua franca, two languages would be needed; for those whose mother tongue is different from the indigenous language used in primary education, four would be needed. Laitin does not explicitly discuss the possibility of a country using multiple indigenous languages and translating between them (as happens for example in Belgium, Canada and Switzerland).

Applying the distinction between designed and discerned languages, it is clear that learning to use a designed language *always* requires some level of effort and learning, no matter how close the designed language is to the learner's mother tongue. However, in order to create as much equality of opportunity as possible, it is important to use a language in primary education that is as close as possible to the discerned language of the learners. In terms of the classification proposed above, it would be important to use a language that is *very easy* but it does not have to be the discerned language itself. This does not mean that speaking the designed language in school would necessarily have to be enforced – if

the registers of the learners are close enough to the designed language, then there could be sufficient mutual intelligibility in the classroom to allow children to speak in a way that seems most 'natural' to them.
For secondary and tertiary education, using an easy language will be necessary in order to efficiently reach the largest number of learners; it may not always be possible to use a *very* easy language, but it should still be as easy as possible; in many cases, such an easy language will also be a *lingua franca*; if not, if the language becomes widely used in secondary education in a particular area, it might develop in that direction. It will be necessary to introduce that language as a subject in primary school. Likewise, in later years, it might be helpful to also introduce an international language and/or a second indigenous language as a subject.
Laitin writes about the number of 'languages a citizen needs'. He does not specify *which* citizens need those languages and at *which level* (s)he needs to be able to communicate in them. Clearly, to allow citizens to participate as widely as possible in a national democratic process, all citizens need to be able to interact with state institutions (the judiciary, legislature and executive branches) in a language they have mastered to a sufficient level. As argued in the previous chapter, this will usually not be an international language; for many African countries, the Laitin 3 ± 1 model and the two-language model may not lead to inclusive results: the ultimate solution may have to be found in using more than one official indigenous language and to translate between them.

5.5 Conclusions

In this chapter, I have examined the last of my research questions: what possibilities are there for rational language-in-education policies in Africa?

I started my reasoning by arguing that a rational language policy that aims at being decolonial will be based on creating equal opportunities for all children, creating equal access to state institutions and to political debate for all citizens, regardless of their socio-economic status.
I call into question the implicit assumption in much of the literature that anybody can learn any other language with equal ease: I point to the fact that linguistic capabilities are not distributed equally over the population and that it is not one-dimensional. Thus, there are people who are gifted in a number of ways, but not in language learning.

Because learning occurs to a large extent through language, it is important especially for those less gifted in language to use a designed language that is as easy for them to learn as possible – in other words, to use a language that is close to their discerned 'mother tongue'.
This, in combination with the possible increase in enrolment rates that was discussed in chapter four requires a shift towards African languages. However, in order to make such a shift practicable, I propose four principles:

1. It will be necessary to develop a **limited number** of designed languages for education. It is not practical, but also not necessary, to aim to develop all discerned languages into designed languages.
2. These designed languages should be chosen in such a way that they are **easy to learn** for as many speakers of discerned languages as possible.
3. Strive for **inclusivity**: choose the various designed languages in such a way that all have to exert a relatively low but relatively equal effort to learn them.
4. Make use of **existing bilingualism** as a resource.

In order to develop a way of thinking about how to work with these principles, I made use of the ASJP database; the associated software is able to calculate a measure of distance between two languages that is based on Levenshtein or Normalized Edit distances; such distances have been used widely to assess mutual intelligibility of related dialects and languages. However, I have made new use of them, by benchmarking ASJP distances to an extensive US Government schema for easy and difficult language pairs, leading to a division into five categories, going from very easy (around 12 weeks of instruction needed to reach a level sufficient for tertiary education) to very difficult (around 80 weeks of instruction needed to attain the same level). This yielded a new way of approximating which languages are 'easy' or 'difficult' and for whom.
It now becomes possible to study rational choices for language in education, choices that as chapter four has shown are bound to become inescapable for several African countries in the next decade or so.
In chapter two, I already quoted Vansina, who has discussed that there used to exist a limited number of 'cultural traditions' in Africa, much more limited in fact than the number of discerned languages or of ethnolinguistic groups on the continent. He predicts that in future, new cultural traditions will emerge, but those will also be limited in number. In chapter three, I came to conclusions that seem to support Vansina's

predictions. In chapters four and five, I outlined why in future, a change to African languages, considered to be important for the development of such new cultural traditions, will become unavoidable, at least in some countries and to some extent, in the foreseeable future. I developed a way of looking at how it would be possible to make rational choices in this area for a limited number of designed languages. In the next chapter, I will try to bring together those strands (to the extent of my limited abilities and knowledge) through a few case studies.