The concept of inclusive education: teacher training and acquisition of English language in the hearing impaired

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Introduction

Today, in most countries, the study of special education forms part of the training of most teachers. There are several reasons for this change: one is the growing realisation that children with disabilities, far from becoming burdens in the society, can, with skilful teaching, often develop into happy and productive citizens; another is the acceptance that most teachers will, at some time, find themselves teaching at least a few children who are to some degree impaired. Inclusion as goal, however, need not imply the location of every learner in the mainstream classroom for all or even part of the time (Powers, 1996). The goal of inclusion might be thought to be achieved by a variety of practices, for example, offering pupils with special needs finely tuned positive discrimination; or offering specialist or intensive learning experiences in a separate location which will lead ultimately to the goal of inclusion in the wider society as an independent, confident individual. Good practice means high aspirations, high expectations and a concern for equal opportunities (Powers, Gregory, Lynas, McCraken, Watson, Boulton & Harris, 1999).

With regard to children with a hearing impairment, inclusive education represents the process of educating the deaf not within the artificial confines of an institution but within the more natural structure of the public school system. Its basic premise asserts that because students with a hearing impairment will eventually have to function within a normal world, their assimilation should be given while still within a school setting.

This concept of inclusive education also implies that the hearing and hearing impaired learners in the same class would be taught and examined in the same language structure in order to be able to sit for a similar examination that would be marked and graded similarly. In such an inclusive system, all pupils attend, in principle, the same school. Wamae (2002) notes that this is a great challenge to the trainers of language teachers because they may have to restructure their courses in order to prepare all teachers adequately. Trainee teachers should be in a position to help children with a hearing impairment achieve academically because they may encounter these children in their classes after training.

Although the concept of inclusive education has been around for more than a decade, special educators in Kenya had not embraced the philosophy until recently. The opportune moment arrived as a result of the link programme between the University of Cambridge Faculty of Education, Kenyatta University, and the Kenyan Ministry of Education Science and Technology, special education section (Rouse & Kamau, in press). The programme has been in operation since 2001, and has initiated several activities promoting inclusion. The essence of this paper therefore is to add to the efforts of the project in suggesting one approach that could make the inclusion of children with hearing impairments into the regular system of education more successful.
Research findings on the inclusion of children with hearing impairments into regular schools

Research on integrated education for children with hearing impairments attempts to correlate progress in various aspects of the child’s academic, intellectual and linguistic, social and emotional development. These studies are generally termed ‘efficacy studies’ (Cave & Madison, 1978). Much of the research (Ross, Brackett & Maxon, 1982) attempts to relate school placement to the academic and intellectual progress of the child with a hearing impairment. One broad generalisation that can be made about these formal investigations is that they demonstrate that the degree of hearing loss is the greatest single factor affecting educational performance. In addition, they have revealed that the more ‘normal’ the school setting, the greater the academic gains or achievements of the child with a hearing impairment (Quigley & Kretschmer, 1982; Johnson, 1962, 1963; Concord, 1979; Dale, 1978).

Previous studies have not only compared segregated and integrated schooling for hearing impaired pupils but also investigated the effects of different degrees of segregation/integration. Four educational programmes were compared, ranging from full integration with no special support to partial integration where hearing impaired pupils were integrated for non-academic subjects only. The results indicated that integration per se had some independent role in the pupils’ superior achievements. The children with hearing impairments continued to improve in the integrated programmes while those in the partially segregated classes fell further behind.

The overall picture that emerged from these studies was that even those children with severe and profound hearing losses achieve better academic attainments in ordinary schools rather than in special schools. Further, hearing impaired pupils, regardless of degree of hearing loss, achieve better academic attainments the more fully they are integrated. This latter finding is corroborated by a thorough and extensive study undertaken by Jensen (1973); Jensen, Karchmir and Trybus (1978); and Jensen and Trybus (1979) in the USA.

The role of teachers’ attitudes in an inclusive education for the hearing impaired

Favourable teacher attitudes are thought by many educators to be critical for the practice of inclusive education to succeed. Many investigations have sought to establish the nature of class teachers’ attitudes. Most of these studies, for example, Alexander and Strain (1978); Horne (1979); Baum and Frazita (1979); Byford (1979); Baker and Gottlieb (1980); and Anderson (1977), have in the past reported relatively unfavourable teacher attitudes towards working with pupils with special educational needs and a certain amount of unwillingness on the part of teachers to receive disabled children into their classes. On the other hand, Hegarty, Pocklington and Lucas (1981) and Loxham (1982) have found more positive attitudes among the teachers towards handicapped pupils.

Cave and Madison (1978), in their review of literature on special education, suggest that unfavourable teacher attitudes towards disabled children stem from insecurity and sometimes from resentment arising from ignorance and inexperience of children with special educational needs. According to these writers, what seems to be important in influencing teachers’ attitudes is their knowledge of the implications of disability and their experience of children with a particular impairment.

That ‘knowledge’ is a critical factor in determining a teacher’s attitude towards handicap is confirmed by a number of studies. Researchers have investigated teachers’ feelings about children with different disabilities and related this to teachers’ knowledge of the different impairments. The studies reveal that a disabled child’s position on the teachers’ ‘desirability’ scale has a direct relationship to the teacher’s knowledge of that disability or impairment.

‘The more informed a teacher feels about a handicapping condition, the more inclined she is to feel comfortable with the child having the condition and the more accepting will be her attitude towards the child… There is no fear like the fear of the unknown.’

(Wenday, 1986, p.45)

In another survey conducted in England, Scotland and Wales as part of the Warnock Report (1978, cited in Wenday, 1986), the committee reported that:

‘The evidence we have received strongly supports the view that ordinary schools need better and more comprehensive advice and support if they are to make efficient provision for children with special educational needs.’

(p.45)

That teachers need knowledge and understanding of handicap if they are to feel competent to teach a disabled pupil and to receive him or her willingly into their classes accords very much with common-sense reasoning. So also does the idea that ‘experience’ with a pupil helps teachers feel more confident in having such a child in their class and this is confirmed by research evidence. In addition to ‘knowledge’ and ‘experience’, there are two other major factors that have been demonstrated to be important in fostering positive attitudes among class teachers towards disabled pupils: these are an ideological commitment to the principle of inclusion of disabled children into normal society and the provision of adequate resources (Stephens & Braun, 1980; Ringlabe & Price, 1981). The latter are obviously important but fall beyond the scope of this paper. However, they are issues of which educators of children with a hearing impairment should take note.

A conclusion that can thus perhaps be safely reached from the presented research findings is that ordinary school class teachers are more likely to have positive attitudes towards a
disabled child, in this case a child with a hearing impairment, if they believe they can make a contribution towards his or her educational development. In order for this to occur, it would seem that both knowledge of the disability and familiarity with the disabled child are critical factors. Also important are the quality of the supportive services offered to a teacher receiving a child with special educational needs and a commitment on the part of the teacher to the idea of inclusive education, for example, for the hearing impaired. Equipping the teachers with relevant and appropriate knowledge and skills in specific subject content areas may be regarded as a crucial supportive element.

The importance of developing an appropriate language in children who are hearing and hearing impaired

Language is the vehicle through which needs and wants are conveyed. It enables the child to comment on his experiences, to predict and reflect on many issues. Without language, social contacts are difficult to make and sustain. We need language to direct and organise ourselves, to experiment, generalise and connect one idea to another. Verbal reasoning is enmeshed with cognitive growth: we analyse, explain and make judgements through language. The early forms of intelligence tests were mainly verbal in nature. In other words, verbal ability was believed to correlate directly with intelligence. This feature of the intelligence tests has been a focus of intense criticism from educators and psychologists who feel that intelligence can be expressed in the many other modes in addition to the verbal one (Kamau, 2003).

According to Lewis (1958), language may be the chief means by which the world comes to exist as a world of perceived objects. Mead (1938, cited in Lewis, 1958) states that ‘language does not simply symbolize a situation that is already there in advance; it makes possible the existence or the appearance of that situation or object.’ All evidence goes to show that ‘perception with language’ is not something that is superimposed upon ‘perception without language’ but that, normally, language is an essential instrument of perception. In other words, it helps to concretise the world and even helps us to demonstrate what we understand about the world.

At the primary school level, language is the raw material, the process and the product of learning. This means that, for younger children, the main content of teaching is language. Pupils are taught how to read and write so that they will be in a position to use this facility to learn subject content in their future academic undertakings.

The language of the classroom can be demanding even at the primary school level. The child has to familiarise himself or herself with such simple or basic instructions from the teacher as ‘Take out your books’, ‘Copy the work from the board’, ‘Write down your answers and bring them to be marked’, ‘Draw a margin’ (Webster & Ellwood, 1985). In other words, one way of ensuring that children are acquiring language is by examining the range available to them and how they make use of it.

The other aspect of language that is crucial is syntax. This refers to the manner in which words are arranged to make sense, as one tries to communicate an idea. A very mild degree of hearing loss may depress the normal rate of language development (Quisel y, 1978). Consequently, the difficulties that children with hearing impairments experience in understanding complex language patterns are crucial in considering academic performance.

Reading is the other aspect of language that is critical in education. Reading has been described as the ‘window into knowledge’ and one of the important goals of education is to develop the ability to read. This is as true for normally hearing children as it is for the hearing impaired (Webster & Ellwood, 1985).

Written language is another dimension of language that is vital in proper language development. It is a higher level of language development. The written language of the hearing impaired has received more research attention than any other aspect and is less open to ambiguity. Much of this research has been carried out with samples of individuals who are severely hearing impaired and we should be careful about overextending these findings to all children with hearing impairments (Webster & Ellwood, 1985). The evidence suggests that children with hearing impairments make a greater number of grammatical errors in writing, such as omissions of articles, prepositions and verb auxiliaries. They may use sentence forms that to some people seem not to have grammar at all and show no awareness of how words are modified in their use with other words. They may use shorter and simpler sentences with little variety, so that a structure is repeated rigidly, such as the simple subject-verb-object pattern. It has also been suggested that the hearing impaired find it hard to write connected language and approach writing sentence by sentence.

We have to look once again to the problems that children with hearing impairments experience in the linguistic system, to account for some of the features that appear in their written work. It is probably true that children with hearing impairments do acquire linguistic rules, but this takes a very much longer time and the more severely hearing impaired the child, the greater the gap between him or her and his or her peers. It is also worth noting that an older student with a hearing impairment may be attempting to use limited language to express fairly complex, sophisticated ideas and concepts. The written language may look odd or deviant because a primitive language system breaks down under the pressure of more sophisticated communication needs. The student may be trying to convey a complex message without the means to do so. It is quite unfair for such a student then to be judged, in terms of level of understanding and quality of ideas, by what he or she can put down on paper (Webster & Ellwood, 1985). Unfortunately, all the national examinations in Kenya are written. To date, we do not have allowance for oral examinations for those who may not be able to express themselves adequately in the written language due to many limitations, like the ones cited above.
What happens when language is absent or only partly present?
The extensive use of non-verbal symbols only permits rudimentary generalisation. This is true even of children whose language is still developing. The evidence today supports the view that perception is normally mediated by language and that the presence of language not only influences what we perceive but also determines what we remember of this (Lewis, 1958, cited in Powers, 1996). When a person sees a picture or a diagram and afterwards tries to reproduce it, the reproduction is affected, very markedly, by the words that occurred or were said to him or her at the time of the original perception. While part of what we perceive comes through our senses from the objects before us, another part (and it might be a larger part) always comes out of our own mind.

Obviously, therefore, language is essential in learning and in thinking. We live, we perceive, we think, in a world permeated by words. Almost all higher intellectual activity is a matter of words, to the nearly total exclusion of everything else (Russell, 1921, cited by Lewis, 1958). If this is true, what are the implications for the education of those whose hearing is impaired and in whom, therefore, the development of language may also be impaired? Children with hearing impairments grow up in a world of speakers whose perception and thinking are permeated by language. It is not that they merely lack their language or possess it imperfectly. It is rather that their own thinking is mediated by their own symbols, mingled with such language as they have been able to acquire.

As already mentioned above, teachers of children with hearing impairments need assistance in order for them to feel confident in their work. The authors of this paper would like to recommend LAPSE. LAPSE is an acronym for linguistics, anthropology, psychology, English and education. As will be discussed later, the LAPSE theory of teacher preparation gives suggestions on courses that ought to be offered by any teacher training programme for teachers of English for speakers of other languages.

The language problems of the hearing impaired
Dickson (1974) states that ‘sensory deprivation of hearing impaired learners from the pre-lingual years is a major barrier to language learning’. The child who hears the spoken word partially or not at all is unable to progress in the normal sequence of language mastery which includes the development of capacity to comprehend verbal messages; produce intelligible speech; convey thoughts and feelings to others; and read and write competently. Kang’ethe (1989) states that the ability to read is a significant factor to success in education.

According to Gustason and Zawolkow (1999), studies focusing on the English problems of children with hearing impairments identified specific areas of weakness. These weaknesses included omission of necessary words or incorrect use of words and sentence structures that were simple and rigid, with those of 17-year-old students with hearing impairments being comparable to hearing children eight years old. Lexical or dictionary meanings were learnt more easily than structural meanings and deducing the meanings of words from context was not a common skill.

While studies in English language development with hearing children indicated consistent mastery of sequence, no such sequences appeared in the English skills of the hearing impaired. Students with hearing impairments used fewer adverbs, auxiliaries and conjunctions than hearing students (Gustason & Zawolkow, 1999). These problems are not surprising when it is remembered that language input must precede output.

Concerning the language problems of the hearing impaired, Thomas and Thomas (1980) state that ‘in many instances, hearing impaired children are retarded in the language arts’. The level of this difficulty varies according to the degree of hearing loss. Students with moderate hearing losses typically use run-on sentences and omit prepositions, plural suffixes and tense suffixes. The language of students with profound hearing loss is typified by the omission of conjunctions, articles of speech and prepositions. Learners with hearing impairments face reading problems. These problems are not just due to their limited vocabulary but also to difficulty with syntactical structure, idiomatic expressions and multiple meanings.

With the presence of the above problems in the language of the hearing impaired, it is important that the issue of language teacher preparation is discussed intensively and critically. For the hearing impaired to acquire parity in the English language with their hearing counterparts, they have to be fluent in written English. This is particularly important in Kenya since the assessment of their competence in the language depends upon written national examinations. The results (grades) that candidates get in the national examinations are of significant value because they help in the selection and placement of learners in the next level of class, into training colleges or even into jobs.

The importance of English across the curriculum
In Kenya, all schools, including schools for the hearing impaired, follow the same language policy. According to the Gachathi Report (1976) cited in Wamae (2002), ‘From standard four, English should be made a compulsory medium of instruction.’ It therefore follows that from pre-school to Standard 3 children are taught how to read and write in English. From Standard 4 they use the English language to learn. Consequently in Kenya, all subjects, apart from Kiswahili and some foreign languages, are taught and examined in English (Wamae, 2002; Adoyo, 2001). Subsequently, improving English literacy would hopefully lead to improved academic achievement. Mwangi (1991) states clearly that English is not only important because it is examinable but also because it is a service subject in the school curriculum. It is the medium of instruction in almost all the subjects studied. It is also assumed that a student with a good mastery of English would be well placed to understand other subjects on the curriculum.
Since in Kenya English is an official language and the language of instruction from Standard 4, it goes without saying that the mastery of it is of paramount importance to all Kenyans. Bright and McGregor (1975) emphasise the importance of English. They argue that pupils should learn ‘almost all’ the grammatical mechanisms of modern English, whatever future use they intend to make of the language. Any gaps in this learning should be filled since, without this mastery, pupils ‘will not be able to write or speak with fluency and ease’.

Research on inclusive education and mode of sign language used for instruction in secondary schools for hearing impaired

There is a need for researchers in the area of inclusive education to work closely with classroom teachers in order to know exactly what is happening on the ground in terms of the education of the hearing impaired. Research into any aspect of education becomes meaningful when classroom teachers are involved. This is because teachers are with learners in the classroom for a good number of hours in a day and so they are fully aware of the real problems learners face on the ground. They are in a position, therefore, to give a true reflection of what is happening in the classroom. More importantly, teachers are also in a position to implement research findings in the classroom if they are fully involved.

When addressing the issue of using sign language as the mode of instruction in secondary schools for the hearing impaired, Wamae (2002) states that the following questions ought to be asked:

• Are learners with hearing impairments who are exposed to the sign language mode of instruction helped to sit for the national examination and achieve expected results like their hearing counterparts?
• Does the sign language mode of instruction take into consideration the acquisition of the various grammatical structures of English in order to help the hearing impaired learner acquire English as a service subject?
• Can the sign language mode of instruction, used in classrooms for the hearing impaired, help the learner write coherently and undertake fluent and complex composition in standard English?
• Is the sign language mode of instruction adequate in aiding the learner to acquire reading skills in English, for example, so that the learner can read textbooks written in English with ease?

The rationale underpinning these questions is that they may help in re-examining the sign language mode of instruction used in schools for the hearing impaired. The questions could also help in choosing the most appropriate mode of sign language in teaching hearing impaired learners in upper primary school, secondary and post-secondary institutions of learning.

These questions are of paramount importance because the education of the hearing impaired worldwide has been one of the most frequently and controversially discussed topics throughout many centuries (Gallimore, 1993, cited in Adoyo, 2001). As a result, numerous developments and changes in the classroom language of communication have occurred in the past several years in search of a better language of instruction. The questions could be a good base for restructuring teacher training programmes for those working with students with hearing impairments in secondary schools. It is crucial that teaching is appropriately ‘tailored’ to meet the needs of these learners with a view to helping them acquire parity with their hearing counterparts.

In regular classes in Kenya, instruction is given in standard English so that hearing learners gain competence in English. Wamae (2002) observes that proficiency in English language positively affects performance in other subjects taught and examined in English.

Research findings on how hearing impaired learners acquire competence in English language

A number of researchers have undertaken studies on the language of the hearing impaired and have come up with helpful findings. Studies of hearing impaired students who used signed exact English found that they had acquired some of the most complex rules of syntactic structure in English.

Other studies, based on communication assessments conducted with children with hearing impairments in a signing exact English programme, revealed that, where parents and teachers used signed exact English consistently, the majority of the hearing impaired learners’ reading was at or above grade level. Analysis of language samples from the teachers in this programme illustrated that these professionals were able to sign almost perfectly what they say while teaching students with hearing impairments.

The researchers Gustason and Zawolkow (1999) also established that learners perform well in English when signed exact English is used as a main mode of instruction. Other findings revealed that children with hearing impairments were able to learn signed exact English and they adjusted their use of signs and speech based on the speech and sign language abilities or preferences of their communication partners.

Most classrooms for the hearing impaired use signed exact English (Stokoe, 1992). In this mode, signs are produced corresponding to the words in an English sentence in English word order. Yule (1995) notes that the argument in support of signed English is that one of the major aims of education for the hearing impaired, for obvious educational and economic reasons, is to prepare students to be able to read and write English. This will equip them to take part in the hearing world. Quigley and Kretschmer (1982) note that signed exact English, which was invented to help the hearing impaired child in education, uses natural signs and invented signs to make American Sign Language conform to the structures of spoken English. If parts of the spoken utterances are not signed most of the time, the
morphological markers will be affected. In signed exact English, every sign has its English equivalent. Where a sign cannot be found to portray the exact meaning of the word, educators recommend finger spelling as a viable alternative.

The LAPSE theory of teacher preparation in English as a second language

LAPSE theory (Lee, 1974) proposes that a number of different courses should be included in any teacher training programme for teachers of English for speakers of other languages. Each of the letters in the acronym stands for an area of focus that is crucial in the preparation of teachers.

‘L’ stands for Linguistics and suggests that trainee teachers require an introduction to linguistics; phonetics and phonemics; morphology and syntax; and contrastive analysis.

‘A’ stands for Anthropology or a specific course entitled ‘language and culture’. This suggests that a trainee who is to later teach the hearing impaired should be exposed to the various possible signs in use in the country. He or she should learn about the culture of the hearing impaired in order to understand how to modify signs to be used by learners. For instance, alternative forms for various letters of the alphabet have been adopted by the Kenya Institute of Education (KIE, 2000; Akach, 1991), in order to suit the Kenyan context. The teacher’s knowledge of various signs will help in explaining concepts that are not well understood by the learners. In addition, this knowledge of signs will enable the teacher to accept synonymous signs advanced by learners from different cultural backgrounds.

For instance, the sign for ‘fish’ in Kenya could be different depending on each learner’s cultural background.

‘P’ stands for Psychology and refers to the field of psycholinguistics or to the psychology of language acquisition in general. Dickson (1974) argues that a teacher or clinician faced with a child with limited hearing must be prepared to study the whole child. The teacher should be aware that:

1. ‘The primary avenue for reaching the intellect of the deaf individual is the eye’ (Kyle, 1987).
2. ‘The language of the deaf is at the fingertips’ (Yule, 1995).

‘S’ stands for the Sociology of language or sociolinguistics and refers to the social, regional and functional varieties of English. In this case, a teacher of the hearing impaired should be aware of the regional and functional varieties of sign languages. For instance, in a classroom situation, the main mode of sign language for instruction should approximate the correct syntax of English. For other social purposes, Kenyan Sign Language structure or an Interlingua may be used.

‘E’ does double duty and stands for both English and education. Under English may be included courses in the history of English language and literature. Normally under this rubric we would also include English phonology and English morphology and syntax if these had not already been taken care of in the general phonetics and phonemics and morphology and syntax courses under linguistics.

Education includes all things pedagogical but in this instance would specifically refer to methodology courses on teaching English as a second language and techniques of second language teaching. Ideally, such methodological courses should be two-semester courses broken down into two divisions, such as theory and practice and materials and techniques. Here would also be included supervised teaching practice and such things as demonstration, observation and peer teaching in live classroom situations. The primary objective of the courses and training is to provide theoretical and methodological foundations and practical experience leading to competence in teaching situations.

This theory suggests that teachers of the hearing impaired should be trained firstly as teachers; secondly as teachers of English as a second language; and thirdly with a view to helping learners with hearing impairments acquire competence in English. Teachers of English for the hearing impaired should be supervised accordingly in order to help them become competent in their area of professional expertise.

When addressing the concept of teacher training in an inclusive education system in Kenya, it is absolutely necessary also to address the topic of English as a language. As Bright and McGregor (1975) report, ‘in the hands of a good teacher, the English course certainly services every other academic activity in the school and a good many of the extra-curricular ones.’

Conclusion: the way forward

In view of the concept of inclusion, the hearing impaired are part of the wider society. There is therefore a need to teach them in a sign language mode of instruction that can facilitate communication between learners with hearing impairments, teachers, administrators, educators, parents and all people who are interested in working with the hearing impaired. This approach can also help the hearing impaired learn with their hearing counterparts; sit for the same examinations as their hearing counterparts; and achieve good results. Signing exact English can help learners with hearing impairments to acquire correct English usage in a classroom situation and hence their performance in English and other subjects taught and examined in English is likely to improve (Wamae, 2003).

Their good performance would help them hold key positions in the competitive world of work rather than ending up in skills-based jobs like tailoring, knitting and the like. Currently, there are many adults with hearing impairments at bus stops in Nairobi selling sweets and others also begging for money. These are really ‘wasted brains’ – people who would have been helped by an appropriate educational system.
The world is now a ‘global village’ and so the hearing impaired should be taught using signing modes that can enable them to interact with people beyond their deaf community. Hearing educators, administrators and other persons working with the hearing impaired minority can easily learn signed exact English, as research has shown.

Having a hearing impairment can lead to significant difficulties in the area of language. But, as we have seen from the findings of some researchers, learners with hearing impairments are able to adjust their use of signs and speech to accommodate the speech and sign language abilities or preferences of their communication partners. Researchers on inclusive education, together with teacher trainers and curriculum planners, should work closely with linguists who have an understanding of the difficulties experienced by hearing impaired learners. In order to assist the hearing impaired effectively, teachers should also be involved in this research in order to develop a true reflection of what is happening on the ground. These teachers could then be used to implement recommendations based on the research.

Finally, the authors would like to recommend the use of LAPSE theory in the training of teachers of English as a second language, especially for teachers of children with hearing impairments.

References


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