

'ZUNGUMZA NA MTOTO MCHANGA' (TALK TO YOUR BABY)

An introduction to the idea and to the initiative (Briefing Paper 9)

The evidence of our observation since 2008, in urban and rural areas, is that mothers are not, in general, chatting to their babies enough from birth. Everywhere we go we see babies with lively eyes, obviously curious about their environment, but with silent mouths. Tanzanian people, mostly women, have confirmed that, usually, infants are not talked to much *until they begin to speak*. Of course, there are exceptions, and it has been suggested that, in some tribes, talking to babies is a natural activity, although the reasons why it is important to do so are not known. When it is stressed that the term 'babies' is being used to refer to infants in the *first year of life*, people become more sure that there is not very much verbal interaction between these babies and their parents and carers. Some mothers do sing to their infants.

Recent research in the UK and the USA suggests that in educated homes, infants in the first year of life hear up to 2,000 words per hour, this number reducing to around 600 words in poor, less educated families. (To put those figures in context, conversational speech is normally up to 150 words per minute in English). Even in the UK, there is concern that many babies are lacking the necessary quantity and quality of early language input to ensure success later in school and in their future life.

Many studies have shown that children whose language is well-developed before they go to school will be more ready to learn, make faster progress and be more successful in their education. It will be easier for them to acquire literacy skills and to learn additional languages. Children who have a wide vocabulary have the tools to learn to think and to solve problems, and to be creative and independent learners. It follows that it could make a huge difference to the nation if all parents were encouraged to give this precious (and free!) gift of language to their children.

Theoretical framework

It is well recognised among child development experts, those involved in child health and welfare, and education professionals, that infancy and early childhood are the crucial time in determining the later cognitive (intellectual) development of the individual.

There is a wealth of research evidence for the key importance of language development at this early stage of life; in general, a child whose language skills are well developed will learn to read and write more easily than one with poorer spoken language. Language skills underpin cognitive skills, so it follows that by raising standards of spoken language, it is possible to raise intellectual potential. Language is the tool of thought; we need language to think, to develop concepts and to understand the world.

Most experts on the theory of language acquisition believe that humans are biologically predisposed to acquire language. Developing language is a natural process, for which humans are designed. Indeed, it is the main thing which sets us apart from the rest of the animal kingdom. For this *pre-disposition to language* to translate into speaking and listening, the infant needs to be stimulated by hearing his or her 'mother tongue' as much as possible, while brain connections for language are being established, which happens mostly in the first year of life. Even small babies, who cannot speak, begin to recognise the tone of voice of their mother in the earliest days of life, and soon begin to *respond* to being spoken to, long before they can reply. This early 'language stimulation' as it is called, is the foundation upon which the child's whole future development is built, so it is very, very important. There is clear evidence that babies can perceive sound in some way even before birth; parents *can* start talking to their babies as soon as they know of their existence. Babies can hear in the womb, from 3 months *before* they are born (the third trimester of pregnancy).

Small babies make sounds; these sounds are the same the world over: Tanzanian babies, British babies, Chinese babies, all make the *same* range of sounds. It is the influence of the language they hear around them that enables them to select the sounds they will need for their own language, and to learn to recognise the

words of that language. They need to be encouraged to use the sounds, and the words, for themselves, and they must be praised for their attempts, even though, at first, they will not do it very well.

It is very important for babies to be spoken to in a gentle and loving way, and by using real words, not just noises. Research has demonstrated the harmful effects on brain development of habitually speaking harshly to babies, as well as not speaking enough.

The development of sentences is an astonishing process, but not to be described here. However, it is *vital* important that at the time this is happening (from before two years old), the child is exposed to as much language as possible, so he can construct his own sentences, to enable him to communicate. It is as if the child's brain is a huge and powerful computer; but a computer can do nothing if we do not put in the data. It is also important to recognize that this active period of language acquisition is time-limited. There is an ideal time, especially the first year of life, when the brain is developing at an incredible rate for language. If we do not make the most of that, the time will pass and the opportunity will, to some extent, be lost. Children can make progress after that, but they will never reach their potential.

International researchers are in complete agreement about the importance of speaking to babies to enhance language acquisition. They are also agreed that those whose spoken language is most developed at age two, are the ones who will learn literacy most easily. Early success in learning to read predicts later academic success. Those who know the most words at age five are the ones who will do best across the whole of their education. Those who know most language are the ones who have had a rich language environment from birth. This is too important to ignore, especially in view of current concerns about low levels of literacy nationally.

The likely beneficial effects of talking more to babies, and in the right way

The main benefits would be in the development of children in education:

- Children would acquire more vocabulary in the pre-school years.
- They would understand more spoken language.
- They would construct a wider variety of sentences.
- Children are naturally curious and language is the tool they need to begin to construct their own understanding of the world about them. Asking questions and testing the answers are the very food of curiosity – without language that curiosity dies.
- They would be well-prepared to learn to read by five or six years old, so their progress would be faster and more successful.
- Their ability in speaking would transfer into writing (if well-taught) so that their writing skills would develop more easily. Writing skills depend on good spoken language skills.
- Increased language skill leads to enhanced ability to use language as a thinking tool (which is, of course, essential in view of the paradigm shift to student-centred teaching and learning).
- This leads to easier, and potentially deeper, understanding of new ideas and concepts.
- Competence in mother-tongue makes it easier to learn a second or third language (Kiswahili / English); the *earlier* in life these languages are introduced the more easily the child will learn them.
- Strong foundations in language and literacy, in the early years, support the higher level education skills, such as comprehension of text, writing essays, and so on.
- In the longer term, anything which improves educational attainment in Tanzania will have beneficial social and economic effects for the country.
- Children who are skilled in using spoken language are more ready to interact with teachers, so the participatory methods introduced into schools will be more successful and rewarding for students and for teachers.

There are additional benefits, which, although observable, would be difficult to measure, including the closeness of relationship between parent and child; talking to your baby is a pleasure and strengthens family bonds. Babies love to communicate, and they smile, laugh, move, and make sounds when they are talked to. This makes parents feel good, and they find talking to their baby a rewarding experience, which leads them to

talk more. This improved communication between mother and baby should reduce the risk of violence against the child and contribute to the achievement of other objectives in the Child Rights Agenda. It is also expected to contribute to a reduction in maternal depression. One important international research finding is that a rich early childhood environment helps to mitigate the effects of stunting, and the beneficial effects can be observed several years later.

Finally, it has been demonstrated in many international studies of cost-to-benefit ratio, including several studies in low- and middle-income countries that the most cost-effective time for intervention in an individual's life is from birth to three years. In other words, a nation gets better value out of spending on infants and young children than at any later stage of life. There is good evidence that the benefits of well-targeted, high quality intervention early in life, can still be measured many years later (compared with individuals who have not received the intervention)

How can busy people talk to babies?

Talking to babies takes up no additional time; it can be done during the process of daily life. It is not necessary for time to be set aside for this activity, so it does not interfere with daily work. Mother, father, grandparent or whoever is with the baby, carrying him or her on the back, or just being in the same room, can tell the baby how beautiful he or she is, or how much he or she is loved. They can also give a running commentary on the activities going on. For example, the parent or carer may be washing dishes and saying, in the mother tongue of course, things like this:

'Are you watching me wash the dishes?'

'Here's a dirty plate – here comes the water – oh look, now it's clean!'

Instead of washing the baby in silence, the parent or carer could be chatting during the activity:

'Let's wash your face - and your hands – one hand, two hands – now your tummy....'

In this way, and by naming things, and asking questions as the baby is carried around (even on the mother's back), in the house, on the shamba, in the village or on the daladala, the baby is hearing many of the words he or she will be using in the months to come. He or she will not, at this stage, understand everything, but all the language being heard will be feeding and contributing to the developing brain.

'Can you see the flower? Isn't it pretty? Shall we look at it? It's blue, isn't it? etc, etc',

Of course, at first the baby will appear to be making no response. Gradually, the parents will notice how he or she looks at whoever is speaking, and at a few months old will start to make noises, which the parents or carers should copy, while looking at the baby and smiling; the first 'conversation' is taking place! It is not necessary to think of many new things to say; babies need many repetitions, so, for example, it is good to name the parts of the body every day while washing the baby. Singing to babies is also good for language development.

When talking to babies, older children and adults naturally, it seems, speak more slowly than usual, exaggerate the intonation patterns (the voice goes up and down much more), extend the length of the vowels (so the sounds are exaggerated) and they use many repetitions. This is *exactly* what young babies need. All of this stimulates activity in the brain that leads to the baby "babbling". Babbling is the stage before using real words '*ba ba ba*' '*mumumum*' '*gang gang gang*' etc. This stage should be encouraged and responded to by parents and carers; it is an essential stage in learning to talk. Babies babble naturally, and if they hear a lot of language, spoken in the right way, they will babble more, and go on to use many words a few months later. Sadly, babies who are not spoken to very much cease to babble, and their language acquisition will be slowed down and their potential put at risk.

These are very strong words, but the scientific evidence is quite clear. We ignore it at the peril of future generations.

A way to take these ideas forward

A number of individuals and organisations have agreed that it is time for a *national campaign* to educate parents to talk more to their babies, with a focus on *the first year of life*, as they go about their daily lives. This would require a significant cultural shift; it seems that talking to babies is not, at this time, seen as a usual thing for mothers to do, and it seems that it is unusual for fathers to engage much with their young babies.

The benefits of such a change in cultural behaviour are potentially great. A national **'Talk to your baby'** campaign could start this change and, if well done, could make a significant difference in a short time.

This suggestion has met with widespread support, and a project with the Kiswahili name **'Zungumza na Mtoto Mchanga' (ZUMM)** has been established within the Adult and Non-Formal Education Directorate of MoEVT. The Director is also the National Co-ordinator of Education For All.

A multi-sectoral, multi-agency partnership has been established between Government, NGOs and CSOs, and universities, to use all the available expertise and existing structures to make this initiative a success.

There are several parts to the initiative:

- **First**, community-based research, to identify current practices and potential cultural barriers to talking to infants. (2013 – 2015)
- **Concurrently**, the development of an outline Strategic Plan for the future of the project, informed by the data coming from the research.
- **The results of the research** will be published and publicised at a one-day conference to launch the project and promote talking to babies in the media. (November 2015)
- **A media campaign** to follow.
- **Information dissemination resources** have been developed, including leaflets, material for community meetings, a DVD, and other materials to enable the information and skills to reach the community.
- **Later**, the project will employ sustainable strategies, in which information and skills would be incorporated into:
 - Parenting Skills courses as part of the Adult Literacy curriculum* (*see page 6: AEDP)
 - the Primary School curriculum
 - appropriately targeted capacity building for education, ECD and health professionals, and for local leaders and educators.
- Materials and resources for this capacity building will be made available free of charge to stakeholders.
- An on-line Community of Practice will be established for front-line professionals to share information and experience.
- Faith leaders will be encouraged, as trusted local leaders, to be willing to promote the message in their communities.
- These initiatives will be supported by Project Coordinator who will be responsible, with the ZUMM Founding Directors, for advocacy, information, support, and some capacity-building, to promote the spread of the ZUMM messages to communities.

An important feature of 'ZUMM' is that it does not seek to set up any new structures, but to reach the community by using as many existing structures and routes as possible, including incorporating the key message into existing ECD provision. Materials for other language enrichment work may follow on, such as the work done in pre-primary classes.

A major challenge is that it must reach not only town dwellers, but also those living in rural areas. This is a great challenge, but seen by all partners as fundamental. If an information campaign is launched, it will be planned to be truly multi-media, including a focus on media that can reach the rural poor. This calls for a creative approach to information management, and the use of as many existing networks as possible to ensure sustainability.

A hugely important aspect of this initiative is that it is something every parent in Tanzania could do to improve the life chances of their child. It costs *absolutely nothing* to talk to infants, from birth, in the process of daily life. It does not take any additional time. The poorest parents could, in this way, give a precious and valuable gift to each of their children. Surely every mother and father would want to do that? The gift of language can be given, at no cost, by even the poorest parents, to their children. Education starts from birth, and therefore parents must be their child's first teachers.

Another important characteristic of this proposed project is that the key message is very simple, and therefore potentially easy to deliver. Of course, any new message needs several kinds of exposure before it will be trusted; this project would be able to achieve that by the wide variety of media and means involved (publicity, education, healthcare, community involvement, etc.) The behavioural change required is perhaps similar to that which was needed to bring about almost universal uptake of infant immunization. It may take a generation, as it did in the more developed countries.

Donation funding has been provided to cover the cost of the research study (*see page 6*). Further funding will be sought by the partners, to meet the costs of an Information Campaign and setting up of the other initiatives; this will include materials development and training of trainers. Most of the costs of implementation will be absorbed within existing provision, if Government agrees to adopt the recommendations.

What has already been achieved

- Many agencies have become strategic partners:
 - Ministry of Education and Vocational Training (Led by Adult & Non-Formal Directorate)
 - Ministry of Community Development, Gender and Children
 - Ministry of Health and Social Welfare
 - Representatives of these three Ministries together form the Inter-Ministerial Secretariat on early Childhood Development and Education
 - International and Tanzanian NGOs
 - WAMA
 - VSO (provided professional volunteers)
 - Children in Crossfire
 - Civil Society Organisations
 - TECDEN

Other organisations and individuals have shown interest, and some wish to use the materials after the research is completed. The list continues to grow:

- The World Bank
 - Uwezo
 - Save the Children
 - UNICEF
 - USAID
 - Children in Crossfire
 - DFID
 - Development Media International
 - Universities of Dar es Salaam & Dodoma
- The Project Co-ordination Team (PCT), drawn from the main stakeholders, has been established to oversee the Strategic Plan and co-ordinate the project; the first draft has been written, but awaits additional material from the research data.
 - A summary paper of the international research evidence has been written and is regularly updated.
 - An outline course for capacity building for professionals has been written, and is ready to be contextualised at need.

- Information leaflets have been compiled and printed in Kiswahili (also English copies available for advocacy).
- A short information and training DVD has been made (in Kiswahili and English)
- A locally-based *pilot* Research and Intervention Study was carried out between February 2012 and March 2013. This was funded by Children in Crossfire (CiC).
- A successful funding bid to UBS Optimus Foundation, through CiC, enabled the Research and Intervention Study to be extended to just over 1,000 families, in four regions. This work was carried out by local partners judged to have appropriate capacity, whose personnel were specially trained. The study began in September 2013, ended in December 2014, and findings will be reported in at a conference in November 2015.
- A lecture on this issue was delivered to undergraduates on the ECD degree course at University of Dar es Salaam.
- VSO has a project to build the capacity of community health workers to deliver health and childcare message to mothers attending mobile clinics on Pemba. Janet & David Townend (ZUMM) spent several days in May 2013 training the health workers about ZUMM and visiting village meetings at health facilities on the island, to raise awareness among parents.
- The Adult Education Development Plan (ANFEDEP), developed over recent years in the Adult and Non-formal Education Directorate of MoEVT, was approved in March 2012. It includes a section on parenting courses, with a ZUMM course for parents as the example and model.
- A project to train trainers of adult education teachers about ZUMM, and cascade the training was included in the Ministry of Education and Vocational Training's funding bid to GPE in 2013. The bid was successful, and implementation from 2015 is anticipated, as part of LANES.
- The plan to roll-out the dissemination of the messages, after the research findings are reported in 2015, is at an advanced stage of development.
- Data from the randomised control trial, called the Research and Intervention Study has been analysed, and the report written. (*Please see below*)

The Research and Intervention Study

There were about 1,000 families with young babies in the study. In each of the four regions two geographically separated wards were identified and infants randomly selected. After the collection of baseline data, families in one ward received six hours of training in talking to their babies (the Intervention Group), while those in the other ward acted as controls. The allocation of 'Intervention' or 'Control' ward was also done randomly. The two wards in each region were matched, as closely as possible, by the local partners.

The study was divided into phases; the first, Phase 0 consisted of collection of family information and obtaining of necessary consents, then:

1. Baseline: data collectors counted words spoken to the baby in 30 minutes, on 3 visits, to calculate the average number of words per hour spoken. On the third visit, the mother or carer was interviewed, using a specially devised Knowledge, Attitudes and Practice Survey.
2. Three 2 hour training sessions for 3 family members (group size 10 families) over a period of about six weeks – Intervention Groups only.
3. Word counts repeated, and a follow-up KAP Survey administered.
4. Administration of a simple screening test of language comprehension to the infants, now aged about 20 - 22 months.
5. Intervention training for families in the Control Group, for ethical reasons; data analysis and reporting.

At the time of writing, the study has been completed, apart from reporting/publishing the findings. Janet & David Townend (now resident in the UK) returned to Tanzania for September and October 2014 to train the research teams to use the Language Comprehension Test, which was then administered in November. Then the intervention for the Control groups took place, and the complete data set was analysed and the findings prepared for reporting.

Main findings from the study

- A major finding was that the language environment was very poor among both intervention groups and control groups, with surprisingly few words spoken to babies in the first year of life (median score 63 words per hour at baseline). Some data collectors returned from three home visits having heard no words spoken to the baby (awake, and in the same room as the mother/carer). Clearly, a need has been identified.
- The number of words spoken to babies increased over time in both groups, as one would expect, as the babies get older and become more responsive, but those who attended the training programme increased the number of words by, on average, 163%, very significantly more than the controls, who increased the number of words spoken by, on average, 80%.
- The language comprehension of the babies whose parents had been trained was significantly better than that of the control group babies, scoring, on average, twice as many correct responses.
- When the results from individual cohorts were analysed, it became clear that there were considerable differences between regions, with some showing significantly bigger increases in word-count and language comprehension of the babies. These differences are being analysed in more detail.
- The KAP Survey revealed that there was very little knowledge in any group about the importance of talking to babies from birth, or how to do so. Interestingly, the second KAP Survey revealed that the learning that had taken place was mainly as a result of the practical, interactive parts of the intervention programme, rather than the talks; this will, of course, inform the development of future teaching and learning programmes and resources.
- One of the objectives of the KAP survey was to identify any cultural barriers to implementation of the ZUMM messages; none have been found. On the contrary, families have embraced the idea with enthusiasm, especially as the babies respond by smiles and sounds to being talked to, and this response is very motivating for the talking to continue.

Some of the partners involved in the research, having seen how powerful and effective ZUMM is proving to be, have already begun to use the Intervention materials to disseminate the message to the wider community, without additional funding, as part of their ongoing ECD work.

The future

ZUMM has been based in Adult and Non-formal Education/ Education For All, at Ministry of Education and Vocational Training, and at Children in Crossfire (CiC), a UK-based NGO working in East Africa, with a particular focus on children's issues including child health and ECDE, up to the end of the research phase. A number of additional partners will be involved in future activities; some partnerships have been established, and others are under discussion.

The vision for the future of ZUMM is, first, to use as many existing channels as possible to disseminate the key messages to the community, including young people, who will (all too soon) become parents themselves. Over half of Tanzanian women and girls are pregnant by the age of 18.

Several potential funders are awaiting the results of the research, and may be willing to contribute to a consortium to fund roll-out of the message in Tanzania and beyond.

Next, by making all ZUMM resources available free of charge from a dedicated website, in English, (as well as Kiswahili) the idea can be taken up and used by or in any country, translating the materials and contextualising the activities as necessary for the culture.

It is important to note that ZUMM is not really one project; rather, it is a concept, which can be applied in various different projects. The PCT is always looking for innovative ways to get the message out to the community, using existing routes. The VSO project is a good example of this. Other ideas are always welcome.

ZUMM into Action

A number of implementation initiatives are already in development, and others will surely follow. To date, there are three projects at an advanced stage of planning:

ZUMM into Action 1

ZUMM and CiC are working together on a proposal to develop high-quality, accessible teaching and learning materials, available free of charge, for self-study or face to face workshops. They will be contextualised for various groups, including teachers, nurses and local leaders. Resources and programmes will be provided for these people to build capacity in their local communities. A programme coordinator will provide advocacy, information and support, to encourage uptake and use of these resources by Government and the voluntary sector. This will be a 3 year national project, starting early in 2016, subject to a successful finding bid..

ZUMM into Action 2

ZUMM is partnering with Development Media International on an 18 month national project to develop and deliver a media campaign to disseminate the key messages of ZUMM, using radio.

ZUMM into Action 3

ZUMM was one of the projects in the Adult Education Directorate's contribution to the successful bid by MoEVT to GPE for LANES. 500,000\$ US was allocated to ZUMM, for the following activities:

- A one-day workshop to disseminate the research findings
- Making a 30 minute teaching and learning DVD about why and how to talk to babies from birth.
- Training of Trainers of adult literacy teachers in delivery of a short programme about infant language
- Cascading of this training
- David and Janet Townend to act as consultants to the project. At present it is not clear when the funds will be released for this work to begin.

This Briefing Paper will be updated as things develop. Please let us know if you would like to receive future editions.

Janet & David Townend
ZUMM Founding Directors

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jantownend@gmail.com