

TRACING SOME SUPPORT MECHANISMS IN MUSIC FOR THE MOTHER TONGUE EXPERIENCE

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This paper examines the use of music as a support system in mother tongue acquisition among children. By so doing, the paper traces some of the ways in which language and music interact in order to support competence development in the former. The question here regards the depth of involvement of musical activities in the language process. This research focuses on some Luo songs and games for children. Through observation and investigation of primary and secondary sources, a number of musical activities and songs have been investigated to establish the depth of this influence upon language learning, including: role plays, lullabies, children's games, and programmed and creative dances. Music has been integrated in education programmes as a learning resource for early language learning and teaching. The main reason for this is that music provides the learner with an experiential opportunity to develop competence in the field of learning with induced pleasure that sustains the drive to learn. As the organization of the sound stimuli, the interplay between rhythm and pitch, music results in a meaningful object (work of art) whose purpose goes beyond just the production of sound. As a multi-media activity, it involves the use of several senses: sight, touch, hearing and speech. During musical activities, elements of language such as vocabulary, sentence structure and meaning are integrated into the activities. This way, the children learn with less stress and more pleasure. The results of this research are intended to agitate towards more concern in policy making for the use of music in the language curriculum for the learners enrolled in the early childhood programmes.

1. INTRODUCTION

This paper discusses the use of music as a support system in the development of skills in mother tongue among Dholuo-speaking children. It is concerned primarily with how certain musical activities are applied during language acquisition in formal and informal settings as support mechanisms to aid the acquisition process. Akuno (2009: 5) says:

Music is a creative process and is a useful tool for the child whose life is full of creative activities. The creative processes in music are performing, listening and improvisation. Engagement in these activities with music develops the child's capacities in even other areas of learning. The voice is a readily available instrument, and comes in handy in school.

This argument underscores the significant role that music plays even in

language development. Anvari et al. (2002:111-130) support this understanding of music in their summative definition of music as “a creative play with sound, which arises when sound meets human imagination.” In their research, they examined the relations among phonological awareness, music perception skills, and early reading skills in a population of one hundred 4- and 5-year-old children. They found out that music skills correlate significantly with both phonological awareness and reading development. The regression analyses they performed indicated that music perception skills contributed unique variance in predicting reading ability, even when variance due to phonological awareness and other cognitive abilities (math, digit span, and vocabulary) had been accounted for. Thus, they concluded that music perception appears to tap auditory mechanisms related to reading that only partially overlap with those related to phonological awareness, suggesting that both linguistic and nonlinguistic general auditory mechanisms are involved in reading. In this regard, music applies to any activity involved with the human production and perception of sound. Therefore, any experience, from the strumming of a harp to the blowing of the wind, that involves the cognition of these basic attributes of sound is potentially musical.

Furthermore, the idea that music provides support mechanisms to language development is justified by the parallels that exist between the two modes of communication. Merker (2002), as cited in Fitch (2006:178), argues that both language and music are organized temporally; both show rhythm and intonation and have syntactically structured sequences. In both we perceive the sounds as a sequence of pulses - in language as syllables, in music as notes. And music is, like language, ‘generative’ in the sense that it uses rule-governed combinations of a limited number of elements to generate an unlimited number of hierarchically structured signals. This is what makes them complementary.

It is a central human impulse to develop every one of our biological capacities beyond its original function. We move -- so we can run, jump and dance; we grasp -- so we can paint, hammer and slice; we breathe -- into flutes, balloons and cow horns. Our abilities to engage in and appreciate ‘creative play with sound’ and to consider sounds irrespective of referential functions lie at the heart of early language acquisition. There are simple melodies and games which teachers use during formal instructions without any obvious intention to teach language, but which turn out to supplement the materials learnt in class during language lessons. In addition, children also use similar creative or programmed songs and games during their play sessions either at home or in school, that turn out to achieve similar effects. The areas richly affected by these songs and games include vocabulary development and mastery, tonal awareness in pronunciation, awareness of structures and ordering systems, narration techniques, rhythm and spatio-temporal aspects of language. The skill support areas discussed in this paper

include rhythm, melody and syntactic structures.

2. RHYTHM

The Oxford Dictionary of Music (Kennedy et al., 2013:703) defines rhythm as everything pertaining to the *time* aspect of music as distinct from the aspect of *pitch*. This definition encompasses the effects of beats, accents, measures, grouping of notes into beats, grouping of beats into measures and the grouping of measures into phrases, etc. In performance, 'a good sense of rhythm' is achieved through a judicious treatment of all these factors. Early reading skills are facilitated by the children being taken through the natural rhythm of their own language as captured in their music. All natural languages have clearly defined accentuation, pulses and phrasing points. These work both in music and language in more or less similar ways. This view is supported by Patel et al. (2003:36), who argues that both linguists and musicologists agree that rhythm is an important aspect of language and music. He defines linguistic rhythm as "a composite of several aspects of a language that influence how it is organized in time." The components of linguistic rhythm include the pattern of grouping/phrasing of words within utterances and pausing between utterances; the durational patterning of syllables; the 'configurational' patterning of stressed versus unstressed syllables. For example, English has a roughly alternating pattern of stressed and unstressed syllables and has mechanisms to avoid too many stressed syllables in close adjacency (stress clashes) or long sequences of unstressed syllables (stress lapses). On the other hand, musical rhythm also influences its organization and comprises a set of components. They include the grouping of tones into phrases, a stable underlying beat (pulse) and the organization of periodicity on multiple time scales to create musical meter.

Research has shown that children are sensitive to the rhythmic components of language and can distinguish between languages based on their rhythmic characteristics (Nazzi et al., 1998; Moon et al., 1993; Gervain and Mehler 2010). The concern of children is often with the rhythmic characteristics of the language they hear rather than with the language (Friederici et al., 2007: 2008-2011). This would explain why a newborn can acquire any language as his/her mother tongue no matter the parental race or tribe. Children's early attention to rhythm suggests that they are absorbing the sonic structure of their native language -- its rhythms of stresses, its phonic character, etc. much in the same way that we listen to music.

In rhythmic organization, the beats are perceived by the ear as forming themselves into a pattern of successive groups of 2's or 3's, or a combination of these (i.e. a single group of 4 made up of 2+2 or 6 made up of 3+3). In Western traditions, such groups or combinations in music are shown by the

drawing of bar lines at regular intervals. This divides the music into measures (or bars). The measures, in turn, can build up into larger groups, or phrases. These groupings are defined by *accent*. For instance, a 4-measure phrase is normally accentuated as shown in Fig. 1 below. The same idea applies to a 3-measure phrase as shown in Fig. 2.



Fig. 1



Fig. 2

Some rhythms are simple while others are complex. The form of rhythm is determined by the complexity in the combination of the groups. Children's songs use simple rhythmic structures with short phrases which imply that each phrase has few syllables. This corresponds to the picture given above of the composition of the measures in a rhythmic structure. Children's songs are made up of short phrases. In most cases, the song is structured in a call and response format where the chorus repeats the solo line, and where the chorus responds to the solo call by singing something different. These phrases rarely exceed 4-beats in length. It can be argued, therefore, that the simpler the rhythm the easier it is for children to sing and remember. Similarly, the shorter the phrase in the target language (each phrase having fewer syllables), the easier it is for the children to acquire, use and memorize. For example, the lullaby 'Nyandolo' illustrates the correlation between a musical rhythm and speech rhythm to show how these help children to deal with the issue of phrasing in language. In this song, the singer carries a crying baby strapped on her back, at the shoulder or on the lap. She rocks or sways gently to lull the baby to sleep. It would be sung by children as they imitate the acts of baby care as they see it at home.

<i>Nyandolo,</i>	Sleep
<i>Nindotere</i>	May sleep take him/her
<i>Nindodani obi mana ka!</i>	Grandma's sleep, come here!
<i>Nyandolo,</i>	Sleep
<i>Nindotere</i>	May sleep take him/her

The image shows two staves of musical notation in 2/4 time. The first staff contains the lyrics: "Nya - ndo - lo, ni-ndo te - re! ni-ndo da - ni o -". The second staff contains the lyrics: "bi ma-na ka, ni-ndo te - re, Nya-ndo - lo, ni-ndo te - re." The music consists of simple rhythmic patterns with rests, typical of a children's song.

Fig. 3

In ‘*Nyandolo*’, the structure is simple and based on a 12 bar measure with short phrases, which is quite within the breath-holding capacity of most children. The first thing that is apparent in the song is the length of the phrases followed by the repetitiveness of some motifs. The phrase length helps the learner to be able to manage ordinary speech during a conversation. In addition, each phrase is built on a particular meme. Children would learn that in conversations, there must be topic centres, which drive the conversation forward, acting as reference points for discourse. The repetitiveness underscores the need to learn to emphasize particular aspects of conversations because they are deemed important. Accentuation, which signifies the strong and weak pulse in speech, is also captured in the rhythm of the song with every stressed syllable occurring at the beginning of a phrase. It is also the argument of Fenk-Oczlon et al. (2009: 2480) that the “perceived elements” of speech include the phonemes, the syllables, the words, and even bigger units than the word. The superordinate pattern uniting such elements is accent, which marks the syllabic point of stress within a measure such that a number of groups are separated by a pause. If there is no such pause, subjective grouping may appear which may result in a deviant construction.

Therefore, a song like ‘*Nyandolo*’ gets the child to be more grounded in the language use when she/he metaphorically transfers this learned practice into the use of language in ordinary daily conversations. The song aids the child in gradually learning the speech patterning in his/her language. This happens through a knowledge transfer process from music to mother tongue. It is, therefore, safe to argue that musical rhythm can be used to reinforce the language acquisition process by children.

3. MELODIES AND VOCABULARY DEVELOPMENT AND MASTERY

Melody is defined as “a succession of tones (notes), varying in pitch, which have an organized and recognized shape” (Kennedy et al. 2013: 546). Melody is ‘horizontal’ - the notes are heard consecutively or in a sequence. In first language acquisition, babies start receiving sonorous stimuli in their mother’s

womb and any subsequent experience with language acquisition/learning opportunities are mainly limited to the home situations, the classroom, the teacher, and the classmates (Fonseca-Mora and Carmen 2000:146-152).

Language acquisition depends on interaction as the mediating force for communicative competence development. For instance, teacher talk and parental talk have a lot in common. They both use simplified codes which emphasize the use of naturally occurring language elements to help the learner to form meaningful patterns/rules that underlie language structure and thus be able to speak and understand language (Arnold and Fonseca-Mora, 2007:107-121). They further argue that teacher talk and parent talk “share features such as the frequent use of repetition, of formulaic expressions, expansions, preference for simplified vocabulary, change in voice volume, and modification of intonational contours.” These are speech melodies which indicate emotions and have a great impact on communication because, as Berger and Schneck (2003:689) state, “Humans are not thinking machines that feel, but rather, feeling machines that think”. These melodies become a help for language learning. Exaggerated melodic contours found in adult-directed-to-infant-speech are considered to be parental intuitive behavior to guide their babies’ musical beginnings”. They are also seen as a species-specific learning guidance towards language.

Gardner (1999:204-205) identifies the musical intelligence and the linguistic intelligence as two of the nine intelligences that explain his theory of human cognition. He argues that while the first sound babies emit is that of crying, after a period of time, they are able to imitate rhythm and melodic contours which occur before they are able to pronounce a single word. These musical aspects of language are then replaced by phonemes. This position is reinforced by Maess and Koelsh (2001:540-545) who have discovered that both musical and linguistic syntax are similarly processed. Ayotte (2004:2) observes, in support, that both music and language share the “same auditory, perceptive, and cognitive mechanisms that impose a structure on auditory information received by the senses.”

In learning situations, song lyrics can be presented within a repetitive structure and song vocabulary usually contains common, short words, which the child can quickly identify with. The language of songs, like real speech, is conversational; the lyrics are sung at a slower tempo with more pauses between utterances. This practice helps the child to develop “a sense of inner timing and allows children to speak or read in longer phrases or whole sentences instead of just one word at a time” (Weikart, 1998: 3-5).

Furthermore, melodies play an important role in the mastery of vocabulary. Murphey (1990:53-64) developed the notion of the “song-stuck-in-my-head phenomenon” to explain the relationship between music and memory (i.e. linguistic memory). Repeated lyrics and rhythms have been proved by researchers to be possible tools for enhancing learning/memory of

vocabulary development and other language competencies such as grammatical structures and pronunciation. For example, in a study involving younger learners of English, Hazel-Obarow (2004: 75-76) examined both the short term and long term effects of music on vocabulary acquisition using a pretest-post test-delayed-post test experimental design. The treatment conditions involved the use of music versus no-music during instruction on vocabulary acquisition and retention of story vocabulary for kindergarten and first-grade subjects. Qualitative data, focusing on student motivation and engagement, were collected. Using two-way analysis of variance (ANOVA), no statistically significant results were found regarding the effect of the music on vocabulary acquisition. The qualitative data, however, revealed that treatments that included music appeared to be more motivating for students and engaged them deeper in the learning of vocabulary.

Many other authors have found a positive association between songs and memory. Falioni (1993:97-108) affirms that “many people often remember rhyme, rhythm and/or melody better than ordinary speech.” It is argued that when someone listens to songs, sings and dances, he/she learns the lyrics in an unconscious manner. Murphey (1987:95-100) explains that learners concentrate on messages and ideas in their mother tongue because “they are doing something with the language; they are participating actively in the game called communication.” These authors affirm that divisions of four beats in the majority of songs coincide with the stress and non-stressed syllables of utterances, thus aiding memorization. Akuno (2009: 3-6) provides a simple melodic structure for children’s songs, which confirms the position adopted so far. She argues that there are tonal languages in Kenya, where pitch is used to distinguish the meaning of lexical items. “Where tone is a phonemic feature of the language, music varies from stanza to stanza.” A melodic interval may be changed to cater for the tone of a word just as rhythmic patterns are changed to cater for accentuation. In her view, most songs start in the tonic followed by the dominant, with the median coming a close third and ending on the tonic (d s m d). It means the songs cover a small melodic range, often hovering around a central note, moving up and down from this tonal centre. This simple structure is deliberately created for the young mind of the child to facilitate easy competence building.

Falioni (1993, *ibid*) says:

Practically all grammar points can be found in musical text, and the text also offers a wide variety of vocabulary, all of which can be utilized to practice all communication skills.

The acquisition of pronunciation is one of the aspects aided by music in the mother tongue. If we don’t pronounce words correctly, it could be that we cannot hear them correctly. Singing can facilitate development of auditory capacity and improve word articulation. Leith (1979:537-551) observes that

“there probably isn’t a better or quicker way to teach phonetics than through songs.” Specific songs can be identified to emphasize a specific phoneme or morpheme that we are interested in. This is the case when children are made to sing songs that have tongue twisters during their play or in class. A song like *raolworliel, liellworraoin* Fig. 4 was sung by children during a singing game. In this song, children made a single file and moved in a circle. It was used to train the children about the distinction and articulation of the segments [r] and [l] where they occur in words that follow each other. The crux of the game was that anyone who placed a sound in the wrong place would be asked to leave the line as a punishment. This would go on and on till the last person was declared the best.



Fig.4

This song helps in distinguishing sounds that are phonetically close. The liquids, [r] and [l], are rather confusing for young children. This game gave them a drill which aided the internalization of these sounds. Their occurring in similar contexts made the challenge even greater and the achievement more interesting. Language learning was not supposed to be torturous, but fun for the children and the internalization went on without any form of instruction or awareness.

4. SYNTACTIC PROCESSING IN LANGUAGE AND MUSIC

Language and music afford two instances of rich syntactic structures processed by the human brain. In both domains, discrete elements are ordered in hierarchical patterns according to certain principles of combination (Raffman, 1993:27). Experienced listeners in a given linguistic or musical culture show implicit knowledge of syntactic patterns and principles in a number of ways, including judgments of correctness, memory advantages for rule-governed sequences, and production of plausible substitutions when linguistic or musical sequences are recalled less than perfectly (Blacking, 1973; Sloboda, 1982). These observations underscore the importance of music in facilitating syntactic competence in language.

In both domains it is possible to experience structural patterning with a conflict and resolution in the perception of an unfolding sequence (Sloboda,

1985: 479-96). In addition, in both domains items take on context-dependent psychological functions that are purely relational: for example, “subject” and “predicate” in language and “tonic” and “dominant” in functional harmony (Chomsky, 1965; Dahlhaus, 1990). Both language and music perception crucially depend on memory and integration in the perception of structural relations between elements. It is this kind of context that a song like “*Janyao*” (the weakling) in Fig. 5 is performed. In the song, academic weaklings are ridiculed. The subject of the song, a child who has refused to go to school, is therefore unable to even read letters written to him by his own friends and has to look for someone else to read for him. His parents also find him stubborn and disrespectful. The peers laugh at his folly as a way of getting him to like school, realizing how unhelpful it is to stay away from school. It is a mockery song which defines a context in which a problem is apparent and ends with a resolution. Each phrase in this song is assigned a role either as subject or argument and the discourse develops into a resolution.

Ja - nya - o wa-nyie-ro ko-ling' e i da- la, ka min ma-re ko - ne
 nya - thi - ni ya - nya, o - siep - ne ko - ndi - ko - ne to
 dwa - ro ja - so - mo, nya - thi - ni wa-nyie - ro ni ha, ha, ha.

Fig.5

Furthermore, syntax anticipates ordering of events in some specific manner on the basis of some rules. Children’s musical games are built on events and episodes, which must follow a defined pattern else a misnomer in the game results. The integration principle applies upon the ordering of words into phrases and phrases into sentences. It seems quite plausible to assume that music perception involves continuous prediction and integration of events into a perceived relational structure in working memory. In the song, ‘*ng’ielo*’ (python) in Fig. 6, children file, holding the person a head at the waist as they sing and move forward. This patterning is protected by rules of position, time and space or the game does not go on well. This correlates with the application of syntactic rules upon sentential formations. As children go through this kind of game, they unconsciously develop keenness towards

rule application, structuring and integration of subsystems.

The musical score consists of two main parts: 'solo' and 'Response', each with two staves. The 'solo' part is written in 3/4 time and features a melody with lyrics: 'Ng'ie-lo ng'ie-lo, ng'ie-lo ng'ie-lo ka-'. The 'Response' part is also in 3/4 time and features a melody with lyrics: 'Ng'ie-lo ja-godh-re, ng'ie-lo ja-godh-re, ta ku-mo a-ye, ka - ta ku-mo dhi-ye, ka-'. The score includes various musical notations such as notes, rests, and bar lines.

Fig. 6

5. CONCLUSION

Music supports the development of linguistic competence in a variety of ways. The communicative skills benefit from the use of music during early competence development because, as we have seen, there are lots of points of convergence between the subsystems of the two genres. Throughout the world, normally hearing infants are taught language through speech. Both music and speech involve “creative play with sound” and require attention to acoustic features. Therefore, musical engagement during language learning is important since it helps the child to grow with the language.

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