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Educational Cartoons as A Pedagogical Strategy for Second Language Acquisition: A Study of Fourth Grade Learners in Moiben Sub-County, Kenya

Faith Chepkemoi Kirui[1], Robert Ochieng[2], Caroline Kimathi[3]

[1,2](Department of Languages, Literature, and Communication, The Catholic University of Eastern Africa, Kenya)

[3](Department of Languages and Literature, United States International University of Africa, Kenya)

ABSTRACT: Educational cartoons are gaining increasing recognition as effective tools for supporting language development and literacy, especially among children learning English as a second language (ESL). While research has highlighted their overall effectiveness in improving literacy, there is limited evidence on their role in fostering specific language learning strategies (LLS), particularly in rural and under-resourced educational environments. In rural Kenya, many primary school pupils continue to face challenges with basic literacy in English due to limited exposure, the dominance of local languages in daily life, and a lack of access to supportive learning resources. The study objective is to investigate the impact of the educational cartoon Akili and Me on the use of language learning strategies (LLS) among Grade Four pupils in rural Kenya, specifically within Moiben Sub-County. The research was guided by Oxford's taxonomy of LLS, categorising strategies into six groups: memory, cognitive, compensation, metacognitive, affective, and social. Mayer's Cognitive Theory of Multimedia Learning provided a conceptual framework for understanding how audio-visual content can enhance information processing and memory retention. A mixed-methods research design was employed, combining quantitative and qualitative data to provide a comprehensive understanding of the intervention's effects. The target group consisted of Grade Four pupils in public primary schools within Moiben Sub-County. A total of 104 learners were selected through purposive sampling based on their English performance and basic literacy challenges. The learners completed the Children's Strategy Inventory for Language Learning (CSILL), participated in structured interviews, and undertook follow-up assessments of vocabulary, reading, writing, and speaking. Quantitative data were analysed using descriptive statistics, and qualitative insights were generated through thematic analysis. Findings reveal that learners initially relied heavily on compensation strategies. Post-intervention, there were marked increases in memory, cognitive, and social strategies, while affective and metacognitive strategies remained underutilised. The study concludes that Akili and Me significantly improved learners' employment of effective language learning strategies. It is recommended that educational cartoons be integrated into classroom teaching to bolster foundational language skills, especially in underserved rural areas.

INTRODUCTION

In second language (L2) learning situations, especially where the L2 is not their native language, Language Learning Strategies (LLS) significantly assist learners in coping with language learning outside the classroom setting. Oxford (1990) posits that LLS refers to particular actions, behaviours, or techniques applied intentionally or unintentionally by learners to carry out language learning. These approaches are especially relevant for young children, who are developing both cognitively and linguistically and tend to need stimulating, concrete, and manipulative approaches. In multilingual and under-resourced environments, where there is not sufficient recurrent high-quality language input, LLS offer important strategies of coping with linguistic struggle (Lorenz et al., 2021).

Furthermore, the transition towards learner-based instruction in most countries, including Kenya, makes LLS teaching and learning even more crucial. Such paradigms of education prompt learners to study on their own, have goals, monitor progress, and use various resources, all of which have a great deal to do with productive language learning strategy use. Therefore, it is crucial to learn about how children learn and use LLS upon exposure to other learning modes like instructional cartoons. This helps teachers and curriculum designers build more responsive pedagogic practices that not only consolidate what children are learning but also how they are learning. Early exposure to LLS promotes learner autonomy, motivation, and confidence and renders children self-efficient and effective users of language (Cameron, 2001).

Simultaneously, educational television is a viable means for learning language and literacy. Educational television is intended as programming that is systematically designed with knowledge about how children perceive and understand television (Watson &

McIntyre, 2020). It is programmed to put academic and social curriculum into its programming in a systematic manner. Among the various types of educational television, cartoons are one of the most engaging and powerful tools for the dissemination of educational information. Cartoons fascinate young children with the use of colourful images, character-based stories, and interactive storytelling elements that can play an important role in language acquisition and motivational learning (Fisch, 2004). Programs like Sesame Street and Between the Lions offer excellent models of how this technology takes advantage of the use of narrative, interactive images, and focused messaging in order to enhance literacy and language competence (Linebarger & Piotrowski, 2010; Jennings, Hooker, & Linebarger, 2009). Their repetition, multimodal input, and story-based learning are in line with how children develop naturally with language and encourage more strenuous cognitive processing.

Around the world, research in nations like Turkey, Palestine, and South Korea has repeatedly revealed that animated instructional content improves vocabulary memorization, listening, pronunciation, and even grammatical acquisition among children (Arıkan & Taraf, 2010; Kayaoglu et al., 2011; Kim & Bae, 2020). In addition, studies indicate that multimedia learning environments assist not only cognitive and memory strategies but also metacognitive and social strategies via interactive qualities (Rahimi & Allahyari, 2019; Sydorenko, 2010). The motivational effect of such materials diminishes learners' anxiety levels as well as enhance classroom participation (Pranatha, 2005).

In the African context, educational cartoons are also increasingly relevant. Cartoons like Akili and Me and Ubongo Kids, from Tanzanian-based production company Ubongo, are locally set to represent African languages and cultures. Akili and Me, aimed at children between the ages of 3 and 6 years, has been extremely popular across the continent, being shown in millions of living rooms and screened in more than 20 countries on the African continent in several different languages. Research has associated the program with substantial early literacy, vocabulary, numeracy, and English capability improvements in Rwanda and Tanzania (Borzekowski et al., 2019). Little research, though, has been conducted on how such a program can influence learners' application of language learning strategies. In Kenya, English is a second language and remains the main medium of instruction from Grade Four and above, by national language policy (KIE, 2002; KICD, 2019). However, many learners, particularly in rural areas, face challenges in transitioning to English-medium education due to limited prior exposure, under-resourced classrooms, and inconsistent teacher training. This has contributed to persistent gaps in English proficiency and academic achievement. Although previous interventions like radio-based learning enhanced English skills in terms of vocabulary, pronunciation, and grammar (Odera, 2008; Bates, 1984), multimedia presents new opportunities for the interactive learning of language skills through the medium of learning cartoons.

The educational cartoon Akili and Me was initially broadcast to Kenyan viewers in 2016 and has been widely watched since, especially throughout the COVID-19 pandemic lockdown. Consistent with popularity and increased literature associating multimedia learning and language outcome, little empirical research exists detailing how viewing Akili and Me influences the use of language learning strategies by learners. This is particularly important for Grade Four students, who are at the critical point of moving from foundation literacy to more advanced use of academic language.

This research endeavors to close this research gap through an analysis of how exposure to Akili and Me affects the deployment of LLS under memory, cognitive, metacognitive, social, affective, and compensation strategies among Grade Four students in Moiben Sub-County, Kenya. By doing so, it adds to an ongoing debate regarding whether or not locally produced educational media can be utilized to facilitate language learning and strategy use among young learners in low-resource contexts.

STATEMENT OF THE PROBLEM

In rural areas of Kenya, many primary school pupils struggle with basic literacy skills in English, hindering their ability to communicate, read, write, and understand the language as expected by the curriculum. The prevalence of the mother tongue in social and family settings, coupled with limited exposure to English outside of school, contributes to the delayed development of English proficiency. Challenges such as limited resources, inadequate infrastructure, and negative attitudes toward English continue to hinder learners' progress in acquiring the language. Although the Competency-Based Education (CBE) curriculum in primary schools emphasizes learner-centred approaches, specific challenges faced in English as a Second Language (ESL) classrooms remain insufficiently addressed. This research aims to investigate the language learning strategies employed by learners who watch educational media like "Akili and Me," to explore how educational media can be effectively utilized in ESL classrooms to enhance English language proficiency in lower primary grades.

RESEARCH OBJECTIVE

To establish the effect of exposure to the educational cartoon Akili and Me on the learners' use of language learning strategies across the six strategy categories (memory, cognitive, metacognitive, social, affective, and compensation strategies).

REVIEW OF RELATED LITERATURE

Research on Language Learning Strategies (LLS) has demonstrated that while all students implement some kind of strategy, not all strategies are implemented as well (Oxford, 1989; Gerami & Baighlou, 2011). There have been many studies affirming which

language learners implement strategies often and less often (Rardprakhon, 2016; Foster et al., 2017; Phonhan, 2016), which suggests the variety of differences in the use and choice of strategies. According to Chamot and Kupper (1989), the quality and frequency of LLS use depend on factors including learning context, gender, age, motivation, language ability, learning style, cultural background, and learning context. Traditionally, there has been more research on LLS with adolescents and adults, primarily due to the fact that early models of LLS were developed within the setting of tertiary education (Oxford, 1990). This focus created a wide knowledge gap regarding how children, particularly 6–12 years old learn and use language learning strategies. Gursoy (2010, 2013) posited that the method effective for adults would not be the same when applied to children, considering differences in development, motivation, and socio-culture.

Young children are significantly different from older children and adults in linguistic, social, and cognitive terms. Young learners' strategy use is fundamentally different, where adults might employ sophisticated note-taking or self-monitoring techniques, children naturally gravitate toward play-based, sensory, and socially-mediated learning strategies (Pinter, 2017). For the theory of cognitive development by Piaget, learners in the concrete operational stage of development (ages 7–11) are acquiring more generalised abstract thinking skills, so their access to more advanced LLS is restricted. Purdue and Oliver (1999) propose that cognitive and social abilities of children play an important role in choosing their learning strategy. In contrast to adults who normally acquire a language for occupational or academic intentions, children are motivated by classroom academic achievement or social communication and thereby decide their strategic behaviour. Consequently, younger learners will rely more on affective, social, and compensation strategies, whereas older learners more and more apply metacognitive and cognitive strategies (Doró & Habók, 2013; Chen, 2014). Various studies have revealed such developmental differences. For example, Chen (2014) contrasted more than 1,000 Taiwanese ESL students of various age groups and recorded considerable differences in memory, metacognitive, and affective strategy use. Younger students had already shown early use of memory strategies such as repetition and visual association, whereas older students had evidenced more regular use of metacognitive strategies such as planning and evaluation.

Despite growing international interest, research on African learners is scarce. One of the few African-based studies is that of Magogwe and Oliver (2007), which examined the use of LLS among English/Setswana bilingual learners in Botswana. Its results demonstrated that pupils in primary schools (9–12 years) used affective and social strategies most and that secondary school pupils used metacognitive strategies most, presumably due to differences in maturity of thought. The research also highlighted the significance of cultural factors, with young and adult learners equally preferring social approaches, perhaps due to a prevalent collectivist learning culture. The gap this research finds is highly significant: LLS research in Asia and Europe is well documented, whereas Sub-Saharan Africa particularly Kenya, are less represented. The current study seeks to contribute to this under-researched area by exploring how Kenyan learners in Moiben sub-county use LLS, particularly in relation to educational media.

Individual learner attributes, including attitude, gender, and language skills, have also been studied as variables that influence LLS selection. Platsidou and Kantaridou (2014) discovered that positive attitudes toward language learning influenced learners to use more strategies. Habók (2018), in a Hungarian learner study, found metacognitive, social, and memory strategies to be positively linked to learning motivation and academic achievement and affective strategies less strongly linked with learner success. Milla and Mangado (2019) in a European study of Basque-Spanish bilingual students studying a third language found social, memory, and metacognitive strategies to be most commonly used. Surprisingly, they found that although proficiency and gender had limited impacts on LLS use, differences based on age were more evident in the use of memory strategies.

Recently, the scope of LLS research has broadened to encompass the role of technology and digital tools in the use of and development of language learning strategies. Among these, educational cartoons have also gained popularity as a language-learning tool in different contexts to facilitate language learning mechanisms. Cartoons engage the use of audio-visual clues, context-setting dialogue, and interactive narration to support language learning and recall (Chen & Li, 2018; Mayer, 2009). Sesame Street, a highly popular learning series, is a good case in point for the fusion of research-based instruction with multimedia material. Research indicates that exposure to Sesame Street multiple times boosts vocabulary, listening, and phonological ability (Larson & Rahn, 2015; Linebarger & Walker, 2005). The programming of the show facilitates the use of strategies like repetition, context guessing, and associative learning for young children. Likewise, Dora the Explorer has proved to be effective in vocabulary development, listening, and pronunciation due to its repetition and interactive nature (Widyawati, 2010; Länkinen, 2013). The learners are actively involved with the characters, thus enhancing motivation and ensuring retention of new language structures.

Peppa Pig, originally designed for preschool children, was found to be useful to older students too. Researchers have associated its transparent speech patterns and slow-speed talk with better pronunciation among English learners and oral skills (Laili, 2018; Kokla, 2021). Teacher-facilitated instruction support maximizes these advantages. Less traditional programs such as Ghostwriter, The Electric Company, and Carrascolendas have also been shown to be successful at promoting reading, writing, and cultural literacy (Bryant et al., 1983; Neuman & Dickinson, 2001). Evidence for these shows that if educational television programs are well planned, they can facilitate LLS use, particularly when the program coincides with learners' stages of development and cultures. Although the international evidence base around the impact of educational television on language learning is strong, most of such evidence is from Western and Asian settings. There is relatively little empirical research on how such interventions work in African school

settings. Although shows like Akili and Me have been extensively broadcast throughout East Africa including Kenya there is little research on their influence on language learning strategies among children.

This research fills this significant lack by examining the influence of Akili and Me, a culturally and bilingual learning cartoon, on Grade Four learners' application of LLS in Moiben sub-county, Kenya. Through an analysis of strategy use across Oxford's six groups—memory, cognitive, metacognitive, social, affective, and compensation—this paper makes original contributions to understanding how educational media can be used to facilitate learner autonomy, motivation, and language development in low-resource environments.

RESEARCH METHODOLOGY

This research utilized a mixed methods research design to examine the effect of the educational cartoon Akili and Me on Grade Four learners' language learning strategies (LLS). The design utilized both qualitative and quantitative methods in a way that it was feasible to make extensive analysis in relation to learners' use of strategy after exposure to the cartoon. Creswell (2014) claims that the utilization of the two methods made it feasible to triangulate data, thus ensuring higher validity of findings.

The quantitative part entailed the administration of the Children's Strategy Inventory for Language Learning (CSILL), an Oxford's (1990) Strategy Inventory for Language Learning (SILL) modified specifically to be suitable for children. The tool tested six types of LLS: Memory, Cognitive, Metacognitive, Affective, Social, and Compensation strategies. In order to aid comprehension of children, a shorter Likert scale with visual indicators was utilized. The qualitative part consisted of group semi-structured interviews with the students in the intervention group following each episode watched, which brought out their engagement, emotional reaction, and use of strategies.

Data collection took place in Moiben Sub-County of Uasin Gishu County, Kenya. The region is mainly rural and provided a good setting to investigate the role of educational television in language learning among students with limited exposure to multimedia resources. The target group was about 2,200 Grade Four public primary school students. Purposive sampling of 104 students (52 boys and 52 girls) were selected on predetermined grounds, e.g., teacher identification of students with below average ability in English or literacy problems. Likewise, Akili and Me episodes were purposively chosen based on matching Grade Four curriculum objectives, i.e., learning vocabulary, elementary grammar, and language use function.

Three main instruments were used for data collection. First, the CSILL questionnaire was used to assess learners' use of LLS prior to and following the intervention. Next, oral and written language proficiency tests were given at two moments in time (pre- and post-) to measure any enhancement in learners' English proficiency due to the program. Finally, semi-structured group interviews offered qualitative data on learners' attitudes and behavioural reactions after each viewing session.

Data was collected in three phases. Phase One was the baseline assessments for the intervention and comparison groups. The CSILL and language skills tests were utilized at this stage to gather the data. At Phase Two, the intervention group was subjected to Akili and Me for four weeks. They watched specially chosen episodes in planned class time guided by teachers. There were semi-structured interviews following each episode that received feedback from the learner immediately. The control group was taught regular English lessons during this time. Phase Three consisted of post-intervention data collection using the same tools as Phase One to find out any change in the application of strategy and language knowledge. More interviews were also carried out to investigate learners' general attitudes towards the cartoon and effectiveness on learning behavior.

Quantitative data were processed with the Statistical Package for the Social Sciences (SPSS). Descriptive statistics of means, frequencies, and standard deviations were calculated to determine patterns in learners' use of language learning strategies. Paired sample t-tests determined changes in groups, and independent sample t-tests compared intervention and comparison group performances. Qualitative data from interview responses and field notes were analyzed thematically. Responses were coded into emergent themes of cognitive engagement, affective response, and uptake of strategy. These qualitative findings assisted in locating and making sense of the quantitative data, hence providing a comprehensive picture of the effect of Akili and Me on Grade Four students' language learning strategies.

RESEARCH FINDINGS AND DISCUSSION

Most common LLS used by Grade Four learners.

To establish the effect of Akili and Me program on language learning strategy of the students, CSILL questionnaires were distributed at two critical points: at the beginning and end of data collection. CSILL questionnaires were initially distributed before the screening of the Akili and Me episodes, which provided a baseline of their pre-intervention language learning strategy use.

Pre-intervention CSILL Results

Language Learning Strategy	Mean Score	Standard Deviation
Compensation Strategies	4.2	0.6

Memory Strategies	3.6	0.5
Cognitive Strategies	3.4	0.4
Social Strategies	2.7	0.3
Affective Strategies	2.3	0.2
Metacognitive Strategies	2.1	0.1

The result of the data analysis reveals that, before the intervention, the participants highly favored Compensation Strategies (Mean = 4.2, SD = 0.6). The inference here is a high inclination towards compensation strategies such as using guesses in interpreting unfamiliar words and code-switching to mother language. This strategy had the highest mean score, indicating that this one was most utilised among the learners. Memory Strategies (Mean = 3.6, SD = 0.5) were the second used and the most common used was reciting rhymes in a bid to memorize new words. Cognitive Strategies were the second most utilized (Mean = 3.4, SD = 0.4), and the most common used was reading slowly in English. Least popular were Social Strategies (Mean = 2.7, SD = 0.3), Affective Strategies (Mean = 2.3, SD = 0.2), and Metacognitive Strategies (Mean = 2.1, SD = 0.1), with the latter two being especially low. The affective and metacognitive strategies' standard deviations were extremely low, which represented very low variance in their use, and thus inferring that participants highly agreed with very little use of those strategies.

Based on the research, compensation strategy is the most common language learning strategy employed by Grade 4 students in learning English with extremely low variation in using other language learning strategies. Compensation learning strategies are learner-oriented direct strategies employed by learners to compensate for knowledge deficiencies in the four abilities of learning and producing a new language (Oxford, 1990, p. 90). Most importantly, Compensation strategies allow for the use of the target language for production or comprehension regardless of limitations in knowledge (Oxford, 1990, p. 46). Compensation strategies include practices like: guessing and intelligent guessing, mother tongue switching, using mime or gesture, partial or complete avoidance of communication, message change or approximation, neologizing, reading without looking up every word and resorting to circumlocution or synonyms. There was great disparity in the application of all these strategies, but circumlocution and synonym usage were least employed compensation language learning strategies by the majority of learners. Table 4 below presents a frequency breakdown of some Compensation Strategies used by the learners:

Frequency of Compensation Strategies Used

Compensation Strategies	**Frequency %**
Guessing intelligently	82
Switching to mother tongue	78
Use of gestures and mime	74
Avoiding communication	69
Coining words	64
Approximating the message	57
Reading without looking up every word	51
Using Circumlocution	46
Using Synonyms	44

Although both low and high-proficient learners employ compensation strategies, the majority of compensation learning strategies are utilized by low-proficient learners (Young, 1992; Gallardo-del-Puerto et al., 2020). Compensation strategies could be amongst the most significant for beginning and intermediate language learners, as posited by (Oxford, 1990). The frequency of Compensation Strategies among Grade Four students is supported by findings in earlier research which indicated that the strategies are most applicable to beginners and intermediate learners. (Oxford 1990) also states that Compensation Strategies are most applicable to low-level learners who are subject to lexical gaps and other difficulties. They assist students to deal with and compensate for their limitations in proficiency in language, allowing them to comprehend and communicate despite gaps in their knowledge. This is quite significant for younger learners who are still in the process of developing language skills. These students depend more on such strategies than their higher-proficiency counterparts. Empirical research has confirmed this claim, demonstrating that lower-level learners tend to make more use of more compensation Strategies to compensate for their communication challenges (Gallardo-del-Puerto et al., 2020; Fernández Dobao, 2002). Compensation strategies also apply in reading comprehension because they allow students to deal with lexical gaps (Pasumbu & Macora, 2020). The strategies allow learners to compensate for limited vocabulary through the adoption of contextual guessing and inferencing strategies. For example, when students haven't learned the definitions of some new words in a text, they apply the context and the enclosing sentence of the words to understand the point or meaning. In addition, the results of this research, where younger learners are identified to utilize Compensation Strategies more than any other

strategy in language learning, support past research proving that Compensation Strategies are most common among young learners (Gallardo-del-Puente, 2015; García et al., 2015; Martínez-Adrián & Gutiérrez Mangado, 2015; Pladevall-Ballester & Vraciu, 2017).

Language learning strategies learners used during and after watching Akili and Me.

At the end of the intervention, questionnaires were completed again in an effort to determine any adjustments that may have occurred in the learners' strategic orientation after undergoing the program. This pre- and post-intervention comparison was conducted in an attempt to find out about the impact of the Akili and Me program on the learners' use and selection of different language learning strategies.

Post-intervention CSILL Results (Intervention Group)

Language Learning Strategy	Mean Score	Standard Deviation
Compensation Strategies	3.8	0.5
Memory Strategies	4.1	0.6
Cognitive Strategies	3.9	0.5
Social Strategies	3.0	0.5
Affective Strategies	2.4	0.2
Metacognitive Strategies	2.1	0.1

Post-intervention, the use of Memory Strategies (Mean = 4.1, SD = 0.6) and Cognitive Strategies (Mean = 3.9, SD = 0.5) was significantly boosted. The boosts suggest that the students started using memory and cognitive strategies and ceased overrelying on compensation strategies. Social Strategies also demonstrated a slight improvement (Mean = 3.0, SD = 0.5), which reflects that the students started to participate more in group-oriented and interactive learning practices. Affective Strategies (Mean = 2.4, SD = 0.2) and Metacognitive Strategies (Mean = 2.1, SD = 0.1) did not significantly improve, which reflects that intervention had no influence on these aspects of instruction in any considerable way. The standard deviations of these strategies remained low, suggesting that the use of affective and metacognitive strategies by the learners was maintained low throughout even after the intervention.

Post-intervention CSILL Results (Comparison Group)

Language Learning Strategy	Mean Score	Standard Deviation
Compensation Strategies	4.0	0.6
Memory Strategies	3.7	0.5
Cognitive Strategies	3.4	0.4
Social Strategies	2.8	0.4
Affective Strategies	2.3	0.2
Metacognitive Strategies	2.1	0.1

Unlike the intervention group, the Comparison Group showed only minor shifts in the use of language learning strategies following the intervention. The mean scores were quite consistent for all the strategies, illustrating the singular influence of the Akili and Me program on the intervention group.

The research discovered that the Grade Four students used Memory, Cognitive, and Social strategies significantly more frequently following Akili and Me exposure. This is largely complemented by Mayer's Cognitive Theory of Multimedia Learning (2009), which suggests that individuals learn more deeply from words and images combined than words alone. From this theory, it follows that learning is effective because students have the ability to select, organize, and put together information transmitted by the visual and auditory channels, something that is most useful for young language learners whose literacy is developing. The multimedia nature of Akili and Me is dense in sound, image, and context linguistics that facilitates this kind of processing and is especially beneficial for younger children learning initial literacy and cognitive skills.

MEMORY STRATEGIES

Memory strategies are designed to support learning in the process of storing and retrieving language information. The strategies include repetition, association, imagery, and contextualization. In this research, the learners' application of memory strategies greatly improved after watching Akili and Me, and this is due to the extensive application of multimodal inputs—songs, cartoon images, repetition of master vocabulary, and narration. According to Mayer and Moreno (2003), multimedia inputs offer support for encoding new information into long-term memory through dual-channel processing. Learners reported enjoying the songs and rhymes that introduced new English words. One learner explained: 'I like when Akili sings the word and I see it. I remember it more.' This kind of response reflects the effective use of mnemonic and auditory strategies.

The episodes reinforced vocabulary through repeated exposure to keywords in varied contexts. For example, the word 'clean' appeared during routines like brushing teeth, washing hands, and helping parents with chores, each with matching visuals. This contextual reinforcement made abstract vocabulary more meaningful and memorable. (Oxford 1990) argued that placing vocabulary in real-life contexts helps learners form stronger cognitive associations, a principle mirrored in this study's findings. Similar patterns were reported by Sun and Dong (2004), who found that Chinese EFL learners exposed to educational TV content exhibited improved vocabulary recall due to the visual imagery accompanying new lexical items. Likewise, (Okada et al. 1996) emphasised that when learners create mental images of language contexts, they are more likely to retain vocabulary long-term. The learners in Moiben did this intuitively. As one child stated: 'When Happy Hippo says 'jump' and jumps, I see the jump in my head. I know what it is next time.'

(Slotnick et al. 2012) also support this with neuroscience evidence, showing a strong overlap between visual memory and mental imagery, which share the same neural systems. This suggests why learners could better retrieve information after multimodal exposure. In contrast, in a study by Al-Jarf (2004), students taught new vocabulary through text alone had lower recall rates than those taught with visual and audio materials, reaffirming the importance of multimedia reinforcement for memory strategy development.

COGNITIVE STRATEGIES

Cognitive strategies involve direct engagement with language input through summarization, analysis, note-taking, and application. After the intervention, learners showed significant improvement in applying these strategies, especially in speaking, writing, reading, and pronunciation. Learners reported trying to write down new words they heard or saw in the episodes. As one participant shared: 'I wrote the word 'cloud' on my book because it was in the sky when Akili said it.' This illustrates the beginning of note-taking and visualization as part of a deeper learning process. According to Mayer (2009), meaningful learning requires the active selection, organization, and integration of information, all of which were triggered by the program's multimodal inputs. The program also encouraged learners to read for pleasure, a powerful form of cognitive engagement. Krashen (2004) notes that free voluntary reading develops vocabulary, grammar, and fluency more naturally than rote memorization. The simplicity and repetitiveness of Akili and Me made reading accessible even to learners with lower proficiency levels. Learners also began initiating short English conversations, attempting to transfer vocabulary from the episodes into real-life communication. For instance, one learner said: "I told my friend, 'let's play' like Akili says. She answered me in English!" This demonstrates language transfer and application, cornerstones of cognitive strategy use.

In comparison, O'Malley and Chamot (1990) argued that cognitive strategies help learners manipulate and elaborate on language input, particularly when learners are encouraged to apply what they learn in various settings. This aligns with findings from Riazi and Rezaii (2011), who observed Iranian EFL learners employing more cognitive strategies after being exposed to video-based instruction. Moreover, Paivio's (1986) Dual Coding Theory explains that the use of both verbal and visual codes enhances understanding and retention. Akili and Me episodes frequently reinforced spoken language with corresponding on-screen actions or images, a principle aligned with this theoretical model.

SOCIAL STRATEGIES

Social language learning strategies involve interactions with others for language practice, clarification, or feedback. While the increase in these strategies was modest, it was nonetheless significant. The program Akili and Me indirectly stimulated collaborative learning and peer engagement, as learners began using the language from the show in classroom discussions and informal conversations. This aligns with Mayer's personalisation principle, which posits that learners engage more deeply when content is delivered in a conversational style that feels relevant and social. Social strategies are particularly important in second language learning, as they provide real-life opportunities for negotiating meaning, practicing target language structures, and receiving feedback. According to Vygotsky's (1978) Sociocultural Theory, language development is inherently social and occurs most effectively within interactions between learners and more competent language users. Akili and Me incorporates social scenes where characters model turn-taking, asking for help, and sharing knowledge, which provided learners with templates for interaction that they could then replicate.

These findings also support Wang and Hannafin's (2005) view that well-designed educational media can promote collaborative learning environments and foster peer scaffolding. In this study, learners were observed to repeat phrases used by characters, practice conversations from the episodes, and participate more confidently in English language discussions, particularly during group tasks. These interactions illustrate how media that mimic real-life communication scenarios can improve the learner's sense of linguistic agency. Finally, social strategy use also overlaps with cognitive engagement. As learners clarify meaning, paraphrase, or ask for confirmation from peers, they are also actively engaging in metacognitive and analytical tasks, thereby enhancing comprehension. Chamot and O'Malley (1994) stress that social strategies like cooperative learning, questioning, and peer discussion are instrumental in developing both linguistic competence and strategic awareness.

AFFECTIVE AND METACOGNITIVE STRATEGIES

While there was an improvement in metacognitive, cognitive, and memory strategies, the affective strategies were minimal or did not differ at all after the intervention. Affective strategies encompass coping with emotion, motivation, and attitude towards learning. Despite the cheerful tone, motivational messages, and positive character interactions in Akili and Me, learners still reported difficulties managing anxiety, fear of making mistakes, or frustration when they did not understand. This may reflect what Horwitz (2010) term 'situation-specific language anxiety,' which persists even in supportive environments. The limited uptake of affective strategies could also be attributed to learners' developmental stage. As Brown (2000) notes, younger learners may lack the emotional self-awareness needed to recognize and regulate their learning-related feelings. Without explicit instruction or prompts in the media content encouraging emotional reflection, learners may not spontaneously develop or report the use of affective strategies, even if the media environment is positive and encouraging.

In the same vein, metacognitive learning strategies of planning, monitoring, and assessing one's learning also remained relatively stable. These strategies are often underdeveloped in young learners, as they require higher-order thinking skills like self-regulation, goal-setting, and reflection. According to Purdue (1999), low-proficiency and younger learners use metacognitive strategies the least due to their limited capacity for abstraction and self-monitoring. While Akili and Me excelled at supporting memory, cognitive, and social engagement, it did not provide structured prompts or tools to help learners reflect on their learning or assess their progress. This suggests a potential area of improvement for educational television programs. As Schunk and Zimmerman (2008) and D'Mello et al. (2014) propose, metacognitive awareness and emotional regulation can be taught through carefully designed features such as self-check questions, progress trackers, and interactive reflection activities. Including such elements in future versions of Akili and Me could enhance the learner's capacity for self-directed learning.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This research centered on the application of Language Learning Strategies (LLS) for Grade Four students in Moiben Sub-County, specifically the impact of viewing the educational television program Akili and Me on how they strategically acquire English. The research noted that the students utilized Compensation Strategies like contextual guessing or resorting to mother language as a way of compensating for breakdowns in communication. Whereas Memory and Cognitive Strategies were applied to facilitate an average level of language acquisition, Metacognitive, Affective, and Social Strategies were hardly ever applied, constituting reactive rather than planned language learning behavior.

After being exposed to Akili and Me, intervention group students showed a significant improvement in their application of Memory, Cognitive, and Social Strategies. They progressed further in recalling vocabulary, linking new words with known ideas, and performing language drills formally and informally. The other students also reported initiating conversations in English and talking to others and teachers to get meaning, representing a move towards more interactive and reflective language use. The intervention, however, had little influence on the acquisition of Affective and Metacognitive Strategies. Students persisted in having difficulty with emotions such as anxiety and frustration, and manifested little evidence of planning, monitoring, or self-evaluating their learning. The comparison group, who were not exposed to the program, did not vary in terms of strategy use, indicating the effect of the multimedia intervention.

Findings of this study are firmly buttressed by Mayer's Cognitive Theory of Multimedia Learning that guided the theoretical rationale of the study. Dual channel delivery mode of the program through visual animation and verbal narration seems to have been a major input towards consolidating learners' memory and cognition according to Mayer's dual-channel and active processing assumptions. By the demonstration of conversational language use and contextual facilitation, Akili and Me built a simulation-based learning system that supported strategic development, i.e., in cognition and memory. That restricted contributions toward affective and metacognitive aspects point to theoretical limitations of Mayer's model, which is centered on cognitive processing and overlooks to some extent emotional and self-regulatory aspects of learning, as indicating. These results suggest a necessity for combining multimedia strategies with instruction strategies addressing emotional and metacognitive development, including strategy instruction and models of self-regulated learning.

The broader implications of the research reach into several fields of educational policy and practice. First, the findings validate the worth of educational media as a viable complement to conventional language instruction. Shows such as Akili and Me can offer rich, demanding, and situationally relevant input that supports the continued development of vocabulary, comprehension, and cognition. Such teachers can be assisted by incorporating such media into their teaching timetables, especially within institutions where there is limited access to quality learning material.

In the meantime, the persistence of low affective and metacognitive strategies use indicates that more integrated instruction is called for. Educators must think about integrating educational media with learning-related emotions management, goal setting, and monitoring progress direct training. National writers of the curriculum can also incorporate language strategy teaching into the national curriculum for English so that not only will students be given knowledge content, but they will also be given the know-how to become independent, emotionally resilient learners..

From a design perspective, education media makers can be invited to produce content that exemplifies not only language use but also self-regulatory processes. For example, subsequent episodes of Akili and Me could have characters thinking about their learning, dealing with frustration, or persevering. In this way, it could internalize such strategies and transfer them to their own learning processes. At the policy level, the research advocates for long-term investment in rural disadvantaged school media. Policymakers ought to come in to assist programs that incorporate multimedia tools into the school curriculum, ease collaboration between creators and schools, and encourage teacher education programs for media integration and strategy-based teaching. Giving access to such tools can deconstruct disparities in learning outcomes and quality of education across environments.

Looking ahead, it is clear that several research directions await. Longitudinal studies are required to investigate medium-term effects of multimedia interventions on strategy use by learners and on language ability. Other research could also detail the properties of Akili and Me's features—such as songs, pictures, or character speech—that are most effective with various different types of language learning strategies. In addition, intervention and trial development to enhance affective and metacognitive techniques might have important implications for understanding how students' emotional and self-regulation competencies can be addressed alongside cognitive enhancement. Cross-contextual comparisons would also complete the mission of discovering how student populations, cultural environments, and school cultures mediate multimedia learning effectiveness. Comparing Akili and Me with other education media sources would also guide best practices and align multimedia learning tools to various audiences. Finally, discovering how strategy development materializes in long-term language skill and everyday communication competence will provide a more holistic view of the role of multimedia in language acquisition.

This study makes a significant contribution to the growing body of literature on language learning strategies and instructional media in primary schools. It provides contextualized data from a rural African setting, filling a literature gap in which such groups have previously been significantly underrepresented. It further builds upon the previous work by considering the impact of learning media not only on language learning outcomes but also learners' strategic behavior employed in learning activities. Applying Mayer's Cognitive Theory of Multimedia Learning to an elementary school setting, the study integrates theory and practice and shows how theoretical concepts play out in real classroom and learning behaviors.

Of particular note, research identifies the differential impact of multimedia interventions—enhancing memory, cognitive, and social interaction but emotional and self-regulatory skills yet. The findings lay a foundation for future efforts towards well-rounded, strategy-conscious students by a combination of multimedia learning materials, mindful teaching, and facilitative learning environments. By doing so, the research provides useful recommendations to media planners, educators, curriculum developers, and policymakers who would want to improve language learning under such learning environments.

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