Analysing the Nature of Meaning in Modal Auxiliary Use in Standard Six English in Nakuru County, Kenya

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ABSTRACT:

The objective of the study was to describe appropriateness of modal auxiliary verbs in class six written English. The study focused on the use of English modal auxiliary verbs by class six pupils from diverse language backgrounds in Kenyan primary schools. Modal auxiliary verbs are difficult as their use entails syntactic and semantic appropriateness. As such, most pupils often find themselves unable to use this complex linguistic feature in written English. In spite of this, there is no known documentation that focuses on modal auxiliary verbs among children. It is this gap that the current study sought to fill. Forty pupils were randomly selected from four primary schools in Nakuru County. Data was elicited by means of written composition and grammar exercises. Further, it was analysed both quantitatively and qualitatively and presented in the form of graphs and tables. The Representational Theory of The Mind was used to explain the research findings. The findings revealed that modal auxiliary verbs are indeed difficult and their appropriate use present difficulties in pupils' written work. It was therefore recommended that learning of English should be meaningful. In order to enrich pupil's mental representations pupils should be exposed to a linguistically rich environment to enhance acquisition and learning. It is hoped that these findings will be of benefit to school stakeholders in ensuring that appropriate learning environment is created for pupils. Additionally, it could be a reference for researchers interested in language use at the school level.

Key Terms: Acquisition, language learning, modals/modal auxiliary, second language learning

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Introduction

English is an official language in Kenya. The Kenyan constitution (2010) recognizes English and Kiswahili as the official languages. English is accessible to most communities and deemed prestigious by elites. It is also well established in the primary school system where it is a medium of instruction and used in teaching all subjects except Kiswahili. English is also an examinable subject at the Kenya Certificate of Primary Education (KCPE) (Republic of Kenya, 2002). At class six, a pupil will have been exposed to a variety of modal verbs in the previous years. At class one *may* for permission is taught *can* and *shall* in class two while *will*, *shall* and *could* are taught in class three as for '*may*', '*can*', '*could*' and '*would*' they are taught in class six. The remaining modal verbs *must* and *should* are taught in class seven and eight. The English language syllabus does not actually specify the scope of modal verbs that should be taught.

Compounding the problem is the fact that although pupils' first languages have these modal auxiliary verbs, the modal verb system in their languages can differ from the English usage. The pupils spontaneously carry out written English and grammar exercises using modals as their meanings are not understood. This linguistic feature presents unique challenges to the learners as their use entails intricate mental processing to yield desired meanings. Writing is more involving in terms of processing and conveying what one really desires to put across (Fodor, 1975).

Class six pupils are unique individuals as they encounter the learning of English as a second language in different language learning environments and circumstances. They are bilinguals living in a multi-lingual society with varying exposure to English language use and different cognitive and linguistic abilities. All these factors influence the

manner in which they learn, acquire and use modal auxiliary verbs. Although various child language-based studies have been conducted, to the best of the researcher's knowledge there is no known documentation on the use of English modal auxiliaries in written English among children from diverse language backgrounds. Modal auxiliaries usage presents inherent difficulties even among first language speakers of English. For second language learners of English, more so those in primary schools, modals are bound to pose even greater challenges since they entail syntactic and semantic appropriateness (Hammers, & Blanc, 1989).

Appropriateness of modal auxiliary use is crucial for communication. Available literature reveals that modal auxiliary verbs are difficult even among advanced learners of English. Pupils in Kenya are drawn from different socio-economic classes and the learning of English takes place in environments with immense disparities yet all pupils are subjected to the same rigorous English national examination. A study on modal auxiliary use among this cadre of learners is essential as learning of English in primary schools lays a foundation in which later learning is laid (Lyons, 1977).

Literature Review

Second Language Learning

Krashen's (1988) theory of Second Language Acquisition consists of five main hypotheses but those relevant to this study are Acquisition/Learning hypothesis and the Monitor hypothesis. Since modal auxiliaries are learnt in a formal classroom setting, produced and used in pupils writing in a second language both acquisition and monitor hypothesis are relevant to this study as they help explain how second language learning takes place. Modal auxiliaries are learnt in a formal classroom setting, produced and used in pupils writing in English as a second language.

Second Language Learning Strategies

There are various strategies employed by both the learners and the teachers in second language learning. These methods are employed differently in class six in the teaching and learning of modal auxiliary verbs. The literature available reveals that these methods include grammar translation, audio-lingual and communicative competence approach. Richards (2001) points out that Grammar-translation method is very common among second language learners. In this method, learners translate content on the source language to their native language. This is done with little or no attention being given to communicative competence. Pupils do not play an active role in class, instead, teachers strictly follow the laid down guidelines in the textbooks. Class six teachers in primary schools are still using this method.

The audio-lingual method is also common in standard six classrooms. In this method, emphasis is given to the acquisition of structures therefore drills and memorizations are common. The method has its basis on behaviourism whose emphasis is on reinforcement. Critics have however pointed out that language is not merely habit formation since it is creative and should aim at communication. This method is inadequate for modals because modals entail semantic interpretations. This kind of interpretation of modal meaning requires complex mental processing and not merely the acquisition of structures and memorization of rules. The next method used is the communicative competence approach. Hymes (1966) first proposed the concept of communicative approach in education. The communicative competence according to him entails knowledge of syntax, morphology and social aspects of a language.

The ultimate goal of communicative competence is the progressive acquisition of the ability to use language to

achieve one's communicative purpose. It involves negotiation of meaning between people sharing the same symbolic systems. This method, which is context specific, requires that learners be involved in the various classroom activities that enhance their own learning. This approach seems best suited for modal auxiliary use since it takes into account the communicative role of language. It also addresses the holistic aspect of language. Its use is appropriate as it goes beyond grammatical competence and embraces interpretation of mental content given the underlying content.

In modal auxiliary use, both grammatical and semantic appropriateness are important in determining the appropriate use of modal auxiliaries. As had been mentioned earlier in this study, the teacher factor is important in the facilitation of language learning. S/he should therefore employ strategies that benefit learners in modal auxiliaries learning and acquisition. The choice and implementation of second language learning strategies are important for imparting input to learners. Having mentioned the various strategies that teachers of English may use in teaching pupils we now turn to the strategies that pupils may employ in second language learning. Naiman et al. (1978), investigate strategies for good language learners. They found out that good language learners are able to adapt learning styles to suit themselves, actively involve themselves in the language learning process and are able to develop an awareness of the language. Among class six pupils of English this might not be the case, they may require guidance from the teachers. Teachers have a responsibility of not only focusing on the right or wrong strategy but also helping learners learn on their own. Class six learners should be given adequate and suitable opportunities to enhance their communication in modal auxiliary use. This is because modal auxiliaries signify specific meanings that are crucial to communication.

Language Use in Schools

The education policy is clear on the use of various languages in the education system. It however fails to outline the language of interaction in the school compound. English is the medium of instruction from class four onwards as stipulated by the language policy in education. In spite of this declaration, the execution of this policy is more theoretical than practical. Outside the classroom, pupils use English, their first languages or other languages. The English language used in most cases is inappropriate, as most pupils in primary schools have not yet gained proficiency in the English language.

Paulston (1974), notes that children who use English in the school compound gain proficiency in it. The same idea is perceived in Canadian immersion programmes, whereby, Baker (1993) describes immersion programmes as methods that can be used to foster bilingualism and develop competence in L2. In this method of teaching the learners L2 is the medium of instruction. In the Kenyan situation, real immersion programmes do not take place and that perhaps suggests why class six pupils are not very competent in modal auxiliary use. Baker further asserts that immersion programmes are also said to improve linguistic and metalinguistic ability as well as sharpening pupil's cognitive ability.

English language use among class six pupils enhances proficiency. All aspects of language use; speaking, listening, writing and reading should be focused upon. Speaking English helps class six pupils focus on form and meaning of the modal auxiliary verbs, while listening to others speak it will help them know how these various forms and structures as realized in different sentence constructions are manifested. As for reading, it enables them to internalize language and produce it in real or imaginary settings. The

reading resources selected should thus be thoughtfully selected to facilitate meaningful learning of modal auxiliary verbs. The writing skill is also important as it gives them an opportunity for actual production. The interrelatedness of the four language skills should therefore not be underestimated. If pupils use modal auxiliaries in their speech and writing, they are likely to improve the use of this linguistic feature.

Methodology

A descriptive research design was adopted to describe modal verb use in class six written English. Description of the use of English modal auxiliary verbs was limited to written English. The data collected was quantitatively and qualitatively described. The nine central English modal auxiliary verbs were considered to be the variables of focus. These modal verbs are; **can, may, should, will would, could, might, shall and must**. The study was conducted in Nakuru County; Nakuru Town and Nakuru North. The study targeted both rural and urban population of class six learners of English from various language backgrounds. Four schools were randomly selected. Schools A (public) and B (private) were selected from urban and suburban areas of Nakuru County, respectively. Schools C (public from interior) and D were selected from the rural areas of Nakuru County. Both purposive sampling and random selection techniques were employed. The data constituted one composition and grammar tests. The first test was labelled as Test 1 and the second one as Test 2. Research instruments included composition and grammar tests. Data analysis involved cleaning, correcting and coding of the data. The schools were coded A, B, C and D, and then pupils work was coded 1-10 corresponding to the school they came from in both composition and grammar. Pupils from School A had their work labelled A1-A10; School B, B1-B10; School C, C1-C10 and School D, D1-D10.

Percentages were worked out and then presented in the form of graphs and tables.

Findings and Data Analysis

Appropriateness of Modal Auxiliary Use in Class Six Written English

1) Appropriateness of Modal auxiliary Use in Test One

In Test 1 appropriateness of modal auxiliary use was examined from two perspectives: syntactic and semantic. At the syntactic level, the study examined the form and structure of the verb phrase in which the modal auxiliaries occurred. Semantic appropriateness on the other hand, implied how class six pupils conceived the meanings of modal verbs. Mindt's (1995) modal verb phrase structure is used to analyse sentences with modal verbs in written compositions. According to Manaf (2007), word categories colligate with modals in five different structures. Mindt's criterion was deemed appropriate because his categorization of the verb structure is similar to the one class six pupils used. The categories are as outlined below.

- a) Modal + bare infinitive (you should come)
- b) Modal + passive infinitive (something must be made)
- c) Modal + progressive infinitive (what will you be doing?)
- d) Modal + perfective passive infinitive (it must have been a surprise)

Manaf (2007) adds another category of the modal verb only (*I can*).

In this study, pupils used four out of the six modal verb structures. These were the modal +bare infinitive, modal + passive infinitive, modal + progressive

infinitive and modal alone category while, modal + perfective passive were not used.

The modal + bare infinitive category was the most appropriately used with 115 sentences out of the 125 (92%) sentences in Composition 1. Other sentence structures included

Modal + passive infinitive, for example,

- i) *ogs should be given a hard bone*(School B pupil 9B) or Modal+ progressive infinitive category for example,
- ii) *Poachers should stop killing animals* (School B pupil 7B) or The modal only category for example,
- iii) *I gave the giraffe as much as I could* (School B pupil 10B).

In Composition 2, 49 out of the 52 (94.23%) modal auxiliary use had the modal + bare infinitive category. The modal + perfective category was the only other verb structure used. For example;

I will be taken in our school (School D pupil 10D)

The highest percentage of syntactic appropriateness in Composition 1 was that of *shall* (57.14%), out of seven inappropriate constructions four involved the use of *should*. This was followed by *will* (42.86%). Three out of seven were syntactically inappropriate. It was followed by *can* (27.28%).

Must, had the least syntactic inappropriateness. The examples given below of the modal auxiliaries indicate that the verb that followed the modal verb was either infected, had -ing or two auxiliary modals being used. The examples were drawn from given below were drawn from Composition 1.

- i) *My pet can't eating or playing* (School A pupil 1A)
- ii) *I will going* (School C pupil 7C)

- iii) *You can sell them and have a lot of money that you can used to pay school fees* (School D pupil 5D)
- iv) *iv. My father made a small hole which should the cat can sleep* School C pupil 4C)

There were also instances of syntactic inappropriateness in Composition 2. This included a modal verb followed by an inflected verb for past tense, perfective or progressive aspect or addition of a verb or introduction of an intervening to before a modal verb or even two. The examples given below illustrate this.

- i) *You can gave him* (School A pupil 10A)
- ii) *I will be taken to our school and I will gone* (School D pupil 10D)
- iii) *When you go their you will could be even like a champion* (School A pupil 7A)
- iv) *When we go their we cab be able come number one* (School A pupil 7A)
- v) *It is a must to play* (School D pupil 3D)

The highest syntactic inappropriateness in this composition was *will* (90%), out of the ten inappropriate use of *will* nine were syntactically inappropriate, it was followed by *could* (66.67%) and *can* (50%).

- i) *That way I love football and even when you go*
- ii) *I television I will saw watch some pupils who have been already become a champion.*
- iii) *I love that cut because he could want us to play that game.*
- iv) *I could love that game.*

Syntactic inappropriateness here means a grammatically unacceptable sentence in which a modal has been used while semantic inappropriateness refers to the meaning of a sentence involving a modal verb not used in an acceptable manner. Generally, in Test 1 both compositions

had instances of both syntactic and semantic inappropriateness.

Figure 1: Frequency of inappropriateness of syntactically and semantically inappropriate of various auxiliary modals in class six written English in test one, composition one

In spontaneous writing, pupils have all the time at their disposal to select among the many alternatives of modal verbs available. If modal verbs are inappropriate then it means that the computation of the modal verb was inadequate and therefore the outcome was inconsistent with the general reality. This is because what is conceived in the mind and computed must be compatible with what happens in reality. It was noted that semantic inappropriateness was higher than syntactic appropriateness. This means pupils were able to construct grammatically acceptable sentences involving modal auxiliary verbs better than they were able to convey the meaning of those modal verbs. The highest instances of syntactic inappropriateness were the modal auxiliary

should and *will* which had 42.86% each. The modal verb *should* implies obligation, expression of an opinion or tentative inference and should therefore be followed by a bare infinitive but the pupils' constructions had *should* followed by another modal verb as in;

My father made a small hole which should the cat can sleep (School C; pupil 4C).

It seems in this case that the pupil does not know the meaning, the modal verb is supposed to express. This means that there is a link between syntactic inappropriateness (*form and structure*) and semantic inappropriateness (*modal meaning*). Constructions involving *will* account for another syntactic inappropriateness, the use of *will* and a perfective aspect of the main verb as in the example given below;

I will be taken to our school and I will gone.

This shows that the pupil does not know the prediction meaning of *will* and therefore constructed the sentence using *gone* a perfect aspect of the verb *go*. This syntactic inappropriateness does affect the semantic aspect of the sentences. The finding here is that sometimes syntactically inappropriate sentences are constructed by pupils because the meanings of the modals in question are not known by pupils. The aspect of the tense reflected in the verb phrase of the sentence should also be known. In Composition 1, semantic inappropriateness was highest for the modal auxiliaries *must* and *would* (75%). The modal *must* implies logical necessity, obligation or certainty. We now examine the syntactic and semantic inappropriateness in Composition 2.

Figure 2: Frequency of Syntactic and Semantic inappropriateness of Various Modal Verb in Class Six Written English in Test One, Composition Two

The conclusion that can be drawn from the Test is that, semantic inappropriateness was higher than syntactic inappropriateness in this test. This means most pupils do not have many problems with the form or structure of the verb constituting the modal auxiliaries but have difficulties in interpreting the meaning entailed in modal auxiliaries. It should be noted that there were instances where modals were appropriately used both syntactically and semantically in these compositions. Given below is a presentation of appropriateness of use of some of the modal auxiliaries.

The most syntactically inappropriately used modal verb in this test was *will* (90%) but interestingly the same modal had the least semantic inappropriateness. This means that pupils know the meaning of the modal auxiliary *will* but they have problems with the construction of the modal meaning. It has been observed that in some cases syntactic inappropriateness does affect the modal meaning. This means the form or the structure of a sentence may be inappropriate but the meaning will still be conveyed.

Semantic inappropriateness is deeper than syntactic inappropriateness and therefore requires deeper processing and clear representation to enable generation of appropriate meaning. The structure might be inappropriate but the meaning is conveyed.

Semantic inappropriateness was highest for the modal auxiliary *could* (66.67%). This means that pupils in this test did not know the meaning of the modal verb *could*. For instance in a construction such as I *could* love that game (School C; pupil 3 C) it meant that the pupil did not know the meaning of the modal verb in question. Some significant findings were made in the two compositions (Test 1) with regard to both syntactic and semantic inappropriateness. *Will* recorded the highest inappropriately used modal verb yet it is quite frequently used in both compositions. Syntactic appropriateness is thus not determined by the frequency of use but rather on the understanding of the entire form of the complex English verb phrase. That is; in learning or in acquisition of the modal verbs, other aspects of the verb phrase such as the tense and aspect should be well understood so as to create grammatically acceptable sentences. However, it should be noted that not all syntactically appropriate modal verbs are semantically appropriate. Having presented and analysed data on the inappropriateness of modal verbs, we now examine modal verb appropriateness.

Figure 3: Appropriateness of Modal Auxiliary Verbs in Composition One

Can was the most appropriately used modal and *would* was the least. *Can* in all the instances was used to express either ability or permission. Class six pupils understood the meaning of this modal verb. *Would* is generally used to express a hypothetical situation. The hypothetical meaning is probably not understood by pupils and hence high inappropriateness. Modal verbs are multifaceted. This means pupils could know one modal meaning and the other meanings are not known. It seems thus for modal auxiliary verbs to be appropriately used in any given context, there is need for the teacher of English to present them well so that a mental representation is formed in pupils mind and that way, the desired outcome of the modal auxiliary verb will be produced.

In Composition 2, the most appropriately used modal was *must* in terms of syntactic appropriateness. Most pupils were able to construct syntactically appropriate sentences involving the use of *must*. This could probably be due to the appropriate input data they get either from their classroom learning or from their natural or social environment. In a school environment the use of *must* is frequent and in most cases appropriately used by teachers

when giving instructions. Teachers are actually the role models in a second language-learning environment and perhaps that explains why the syntactic appropriateness involving the use of this modal verb use was high. Given below is a presentation of both appropriate and inappropriate modals in Composition 1. Both semantic and syntactic inappropriateness were considered.

Table 1: Frequency of Appropriateness in Composition 1

Modal auxiliary	Frequency appropriateness	Frequency Inappropriateness	% modals
Can	77.55	24.45	100
Will	69.56	30.43	100
Should	68.18	31.82	100
Could	53.85	46.15	100
Must	60	40	100
Would	33.33	66.67	100
Total percentages	69.42	30.58	100

The Table above shows that in Composition one, at least 69.42% of modal verbs was used appropriately. *Can* was the most appropriately used modal verb (77.55%). This percentage of appropriateness is not very high considering that class six pupils are in their sixth year of primary school and they have learnt most of these modals verbs in their course. It is interesting to note that in this composition, the modal verbs *will* had a higher percentage of inappropriateness of use than appropriateness. This means that this particular modal verb meaning has not been perceived. This is because the modal verb *will* has the capacity of generating more than one meaning compared to other modal auxiliaries. Hence, that other meaning of *will* might not be known.

Table 2: Frequency of Appropriateness in Composition 2

Modal auxiliary	Frequency of appropriateness %	Frequency of ppropriateness %	Total
Will	44.44	55.56	100
Can	69.23	30.77	100
Must	81.81	18.18	100
Could	16.67	83.33	100

The comparison between frequencies of appropriateness illuminates the disparities that exist in modal auxiliary use. The modal verb *could* for instance had a higher percentage of inappropriate use in this composition. It occurred that in both compositions, appropriateness of use was not the same for all the modal verbs. Some modal verbs were more appropriately used than others in pupils' spontaneous writing were. This could be due to the individual pupil's linguistic and cognitive ability. If the cognitive abilities are low, it follows that the mental processing of modal meaning will yield a mismatch between what pupils intend to convey and what is actually conveyed.

Fig 4: Appropriateness of Modal Auxiliary Use in Test One Composition One per School

All the modal verbs used in School A were inappropriate. The pie chart above shows that School B scored the highest percentage of appropriate use. In this school, English is exclusively used in the school compound, the pupils are from a rich social and economic background, the learning resource materials are adequate, diverse and relevant and there are pupils from diverse first language backgrounds. All these factors might have contributed to the good performance of English modal auxiliary use. On the contrary, pupils from School C are from a rural public school where learning resources materials are limited exhibited high levels of inappropriateness. This could be attributed to the fact that most pupils are from the same first language background and therefore English is rarely used in the school compound and the rural environment is deprived of English language use. Below is a presentation of modal auxiliary use in Composition Two. Pupils from School B did not write this composition.

Figure 5: Appropriateness of Modal Auxiliary Use in Composition Two

In this composition, School A had the highest percentage of appropriate percentage. Although it is a public school, its semi-urban population and diverse language background as well as more diversified learning resource materials tend to favour appropriateness of modal auxiliary use as compared to School C. With regard to appropriateness of English modal auxiliary use it has been observed that modal auxiliary verb appropriateness is determined by how much an individual pupil has internalized it and processed it in the mind. Urban and semi-urban schools seemed to have used modals more appropriately than their rural counterparts have. This is perhaps because urban environments are much more linguistically endowed with the use of English than the rural environment.

Appropriate / Inappropriate Percentage of Responses in Test Two

There were twenty questions in Test Two. Pupils were to fill in the blank spaces by selecting the most appropriate modal verb. A brief narration in each question was given to enable pupils conceive the intended meaning.

Figure 6: Appropriateness of Modal Auxiliary Use in Test two

The figure above indicates that class six pupils had more instances of inappropriateness than appropriateness of use. Given that the test was based on meanings of modal verbs, it is clear that class six pupils do not comprehend modal verb meanings. This is probably due to the lack of in-depth learning of this linguistic feature. The graph that follows indicates that indeed modal meanings are not known. We now examine how pupils perceive the meanings of individual modal verbs. These meanings entail possibility, permission, obligation and prediction.

Figure 7: Expression of Modal Meaning as Perceived by Class Six Pupils

The figure above shows the meanings expressed by class six pupils. Possibility meanings can be expressed by using *can*, *might*, *may* or *could*. It was found out that majority of pupils prefer using *can* to express possibility. *Could* was selected only by a few of them (8.75%). Generally, different auxiliary modals can be used to express different meaning. When given the choice of expressing obligation, *must* is more opted for than *should*. *Shall* and *will* are used to

express prediction. Pupils prefer to use *shall* to *will* to express prediction. The question that the data raises is why pupils would choose one modal verb instead of the other. This is probably because modal meanings overlap and class six pupil's English may not be processed well enough to enable pupils know the differences expressed by the possibility of *can*, *might*, *may* and *could*. The possibility expressed by the four modal verbs depends upon the strength of each *may* for example, as used in question four; *It is funny. The head teacher played football with standard six pupils*. Where the appropriate response is, *Funny as it may seem, the head teacher played football with standard six pupils*; expressed a stronger possibility than *might* as in question two; *It is cloudy*. The appropriate choice here was; *it might rain*. *Can*, on the other hand as in question one; *It is possible for men to cry. Men can cry*; the appropriate choice here expresses a stronger possibility but on the background of general upheld belief (*men cannot cry*).

The meaning of permission (*can* and *may*) is not quite well known by pupils. Whereas both express permission, *may* is more formal than *can*. The formality of the two modal verbs may be the aspect that class six pupils do not know. Furthermore, *may* is taught to imply permission and is conceptualized earlier than *can*. Obligations as expressed by *must* and *should* also centre on the strength of each and the context in which it is used. *Must* as an expression of obligation is stronger and it is used in the context of authority and power. Class six pupils do not know these aspects. This is because these aspects are not covered in the syllabus. Prediction meaning can be captured by the use of *shall* or *will*. In this data pupils prefer to use *shall* to *will*. This means, *shall* which is introduced earlier in the syllabus is more frequently used than *will*. The grammatical construction of the two modals is also important, *shall* goes with the first person singular or plural while *will* can be used with all the three persons.

Based on the foregoing, it was found out that pupils' modal meaning is limited. This is because modal verbs usage depends on the intention of the speaker that is, the strength of what s/he wishes to express in the context, exposure and even the grammatical aspect. This is perhaps what class six pupils are not conversant with. Generally, the appropriately used modal in test two was *may* expressing permission 35% and the least was *could* 3.75% expressing request. *May* is a widely used modal verb in and outside the classroom. It is also taught and used practically when pupils are seeking permission. Perhaps this explains why it was the most appropriately used modal verb in this test. When pupils wish to express a request, they have a variety of words to choose from such as *please*. Other alternatives can be used to replace a modal verb use. Since class six pupils find modals difficult, they may prefer to use other words, which are not modals to convey a request. We now examine how each of the four schools performed in appropriateness of modal verbs in this test.

Figure 8: Appropriateness of Modal Use in Test Two per School

The figure shows that School B performed better in the appropriateness of modal auxiliary verbs than all the other schools. This is perhaps due to the effects of learning,

acquisition and exposure to relevant language resources and effective English language use in school.

Appropriateness of Modal Auxiliary Use in Test Three

There were 52 appropriate instances of use. The figure given illustrates modal appropriateness in this test.

Figure 9: Appropriateness of Modal Verb in Test Three.

Like in Test Two, inappropriateness of modal use was higher than appropriateness. This means class six pupils still find modal verbs quite difficult to use in written English and in construction of English sentences. Although inappropriate use was predominant in all the schools it varied from school to school as the figure below indicates.

Figure 10: Appropriateness of Use per School in Test Three

Interestingly, School B posted the highest appropriateness of use in this test as well. It is however important to note that generally appropriateness of use is relatively low. School C performed dismally in this test. It was further noted that there was inconsistency of modal auxiliary use conveying similar meanings as the figure below indicates this.

Figure 11: Inconsistency of Modal Auxiliary Use in Test Three

The figure illustrates that in instances where a modal was used to express the same meaning in different contexts pupils' choices for that particular modal verb use was inconsistent. For example, *can* in question one in this test with the meaning of ability scored 24%, but 6.6% a different question expressing the same modal meaning. The same trend was noted in the use of *will* expressing prediction.

Figure 12: Appropriateness of Epistemic and Root Modal use

The Representational Theory of The Mind posits that part of the cognitive mechanism in the ability to know one's mind, reflect on one's mental content and to process the result in a coherent manner. In the example given the cognitive mechanism for the pupils may not have been developed enough. This is because there is a mismatch between what they know (That *can* expresses ability) in and the application of the same in the questions that call for the expression of the same meaning (Questions Two and Three). The result thus is incoherent with the mental content.

The graph above indicates that root modal verb was more appropriately used than epistemic modal. Epistemic modal use calls for deeper processing than root modal. This is because, epistemic modal entails deductive and logical

reasoning and epistemic modality is involved in making of a representation that matches the world through making use of senses or intellect. The capacity to make the logical and deductive reasoning is what class six pupils seem to be lacking. The highest appropriate was ‘can’ expressing possibility while the last was *will* which indicates habitual prediction. The highest appropriately used root modal was *may* expressing permission. This is due to its constant use by pupils when seeking permission from teachers. The least was *can* for request. This modal verb is rarely used to express request. Below is a presentation of epistemic modal use per school.

Figure 13: Epistemic Modal use per School in Test Two

Epistemic modal use did not occur in Test One. In Test Two there were 440 expected occurrences. 11 questions expressed valid epistemic modal meanings among all the forty pupils. The pie chart above shows that School B has relatively higher appropriateness of modal auxiliary use. It was followed by School A. The two schools are urban. Epistemic modal use is determined by the mental processing. For a mental process to take place there is need for adequate, relevant and appropriate content. In

modal auxiliary use, School B seems to have this content. If the content is adequate, mental processing will take place and therefore the outcome will be the desired appropriate modal verb use.

For content to be adequate, relevant and appropriate, pupils must be exposed to a linguistically endowed environment. These environments could be in the classroom where language learning takes place or the natural environment where acquisition takes place. It follows therefore that School A and B have relatively better language learning environments than Schools C and D. English language use in particular plays an integral role in the provision of language data. In School C, appropriateness of modal verb is low perhaps because among other factors, one language group dominates it and this language group is likely to communicate in MT while in the school compound. This means, English language use is limited and therefore limited modal verb content, processing and therefore low outcome of appropriateness.

The examples given below are drawn from pupils work and they show how modals were used.

- It is possible for men to cry. Begin men might cry (sources: School C pupil 2C)*
- It is possible for men to cry. Begin men could cry (source: School A pupil 3A)*
- It is possible for men to cry. Begin men can cry (source: School D pupil 10D)*

In the first example, the *possibility* in this context is expressed by *might* which is not appropriate in this context because there are no signs that men *can* cry as it would have been if one saw a cloudy sky and say; *It might rain* but rather a conviction from the speaker that *men can cry*. The general belief in the world of this context is that men *cannot* cry but the speaker thinks otherwise. This external reality should concur with what the speaker wishes to express and the

interpretation given to the same by pupils. The only suitable modal auxiliary that expresses this kind of possibility is *can*.

In the second case, possibility is expressed by *could*. The difference between the possibilities of *can* and *could* partly lies in the aspect of time. *Can* being used to denote the present and *could* to denote the past. Furthermore, even if *could* were to be used for the present it implies a lesser degree of conviction than in this particular proposition. The third choice is appropriate from the examples given, it is clear that pupils in class six are not able to tell the different possibilities expressed by *might* and *can* respectively. Majority however seemed to know (23) *can* (5) *could* and (1) *may* from the data out of forty respectively.

It was observed that pupils performed relatively better in root modality than in epistemic modality. This suggests that epistemic modal use present unique difficulties to pupils. Epistemic modals require a high-level degree of computation; this is because they entail drawing logical deduction referred to as tentative inference. In Question 2 Test Two for example, *There are fish in Lake Nakuru, Lake Nakuru should be a freshwater Lake (Test 2 Question 2)*. This requires that pupils know that fish do not thrive in salty water and secondly that Lake Nakuru should therefore be a freshwater lake. The knowledge that the modal auxiliary *should* convey the meaning of tentative inference should be known. Only four pupils out of forty were able to use the modal auxiliary *should* appropriately.

In this study, it was established that there was a mismatch between the mental representation, which is internal (in the mind, in the form of modals), and external reality (*possibility, tentative inference logical necessity and root necessity*). This mismatch often resulted in inappropriate meanings. Epistemic modal use entails a myriad of meanings and the user has to decide on the best alternative in the context given. According to RTM, mental

processes such as thinking, imagining or reasoning are sequences of the mind, they involve deductive reasoning. The following sample sentences drawn from Test Two illustrate how the content is processed and the outcome produced as in Question seven which required the meaning of logical necessity.

- i) Adhiambo got all sums right she must be very clever. (School C pupils 7C)
- ii) Adhiambo got all sums right. She will be very clever (School A pupil 2A)
- iii) Adhiambo got all sums right. She would be very clever (School D pupils 6D)

The three examples above reflect that a majority of pupils selected various auxiliary modals as their appropriate choices. Twelve pupils out of forty-selected *must*, seven selected *will* and six selected *could*. The alternatives were spread across all the other auxiliary modals. Example one, above shows the ability to draw a logical conclusion as reflected in the choice of *must*, even so less than 50% of the pupils did not get it right. In the second example, prediction was the notion conceived by pupils. Perhaps the fact that Adhiambo is getting sums right now is a prediction that she *will* be very clever, whereas there is a sense of drawing relations, which is deductive reasoning, really it is not the future being talked about in this case.

The third choice that the majority of the pupils opted for was *would*. The modal *would* often expresses a hypothetical or an imaginary situation, opting for this alternative suggests the pupil's inability to see the fact that Adhiambo already got all the sums right and that she is therefore very clever. Other alternatives were *could* (3), *should* (2) *might* (5) and *shall* (1). Majority of the pupils were therefore not able to carry out deductive reasoning and therefore made inappropriate choices. Many of the pupils who got it right were from School B. Another example of this kind of possibility

after drawing the conclusion was best captured in Test Two, Question Four.

- i) *Funny as it may seem, the head teacher played football with standard six pupils (School B 9 B)*
- ii) *Funny as it could seem, the head teacher played football with standard six pupils (School D 5 D)*
- iii) *Funny as it can seem, the head teacher played football with standard six pupils (School A pupils 1 A)*

In all the three examples given, eight pupils in every instance chose *may*, *could* or *can* to express possibility which does not quite capture the logical reasoning and possibility entailed in the proposition. The appropriate choice was *may*. *Could* and *can* express possibility but do not quite capture the logical necessity that the head teacher, owing to his status can play football with class six pupils.

Part of the cognitive mechanism as explained in the RTM theory is the ability to know one's mind, reflect on one's mental content and process as well as accommodate the results in a coherent manner. In the example above, one must reflect on what is funny (*content*) and the process (*seem*) and the result (*The head teacher playing football with class six pupils*). One must be able to accommodate the results in a coherent manner. The modal auxiliary therefore should not be looked at, as an individual entity but rather in the context of the given proposition. The modal auxiliary chosen should be able to convey and accommodate the meaning of the proposition coherently. In the examples given *can* and *could* do not convey the meaning of logical necessity required in this proposition as does the modal auxiliary *may*.

Another important concept of RTM is the propositional attitude. This is as proposed by Dretske (1988) and Fodor (1987). They assert that the generalization we apply in everyday life in predicting and explaining each other's

behaviour is indisputable. What a person believes, doubts and desires or fears is a reliable indicator of what that person will do. They refer to this as common sense psychology. According to them, it explains the existence of states; its generalization refers to, for example in Test Two question 16.

- i) *She always gets her lunch by now. She will have her lunch by now (School A pupil 9A)*
- ii) *She always gets her lunch by now. She can have her lunch by now (School D 10 D)*
- iii) *She always gets her lunch by now. She could have her lunch by now. (School B pupil 2B)*

In the examples given, example (ii) shows possibility instead of the habitual action as expressed by *will*. *Can*, was used to express possibility. This means that the meaning of this modal auxiliary was not captured since, *she will always have her lunch by now*, the state of her having lunch by now is can be generalized, this meaning is best captured by the use of modal auxiliary *will*. The use of *can* expresses possibility or permission.

In the third example, the modal '*could*' does not convey the desired meaning. It neither expresses the meaning of possibility nor permission either now or the past. It is *will* that expresses the notion of habitual action. The representational content determines appropriateness of modal auxiliary use. The next section of this research now gives a summary of findings, conclusions and recommendations based on the foregoing presentations and analysis.

Conclusion

Based on the findings of this study, various conclusions were drawn with regard to modal auxiliary use in pupils' written English. Firstly, learners' first language background is insignificant in modal auxiliary frequency of use. But it should be noted that pupils in diverse language backgrounds environment tend to use diversified modal auxiliary verbs than pupils in environments where only one

language group dominates. Urban schools tend to perform better in using modal auxiliary verbs than rural schools. This means exposure, social and natural language learning environment is important in language use.

Secondly, English language use in the school compound is also important in enhancing modal auxiliary appropriateness and frequency of use. In the schools where English was exclusively spoken, modal auxiliary frequency and appropriateness was significantly high. It was further concluded that modal auxiliary frequency does not always translate to appropriateness of use. In this study, the modal auxiliary verb *will* was frequently used but not the most appropriately used.

Thirdly, although Class 6 pupils have some knowledge of modal verbs, they find some modals more difficult than others do. This is because modals have the element of polysemy (*capacity of modal verbs to generate more than one meaning*). Class six pupils have not, at their level grasped the holistic meanings of modal verbs; they are still grappling with the basic meanings these linguistic features possess.

Recommendations

The conclusions drawn above certainly necessitate the following recommendations that would enhance modal

auxiliary learning and acquisition. The learning environment for modal auxiliary verbs should be enriched. This is because modal auxiliary verbs involve mental processing which presupposes the concept of adequate and relevant input data. There should therefore be enough and appropriate input data during the English language lessons to enhance learning. The input data should include relevant, adequate and appropriate learning resources as well as meaningful modal auxiliary learning activities. The learning strategies employed by both the pupils and the teachers should be geared towards helping learners learn, acquire and use modal auxiliary verbs in any suitable context. Pupils should also be encouraged to take part in language promoting activities such as debates, drama, reciting poems, engaging in writing competitions and reading storybooks. In doing so, the pupils will have the chances to improve in all the language skills necessary that is; listening, speaking, reading and writing as this will enhance modal auxiliary use.

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