



Integration of Smartphone as an Instructional Resource in Enhancing Teaching of English Grammar

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Abstract

In Kenya there is overdependence on English course books as the main resource of teaching grammar skills in secondary schools. There is need to diversify and tap into the modern quality digital resources. The paper therefore sought to examine how integration of Smartphone as an instructional resource can enhance teaching of English grammar, to complement recommended grammar resources by KICD (Kenya Institute of Curriculum Development). The main objective of the paper was to examine how the integration of Smartphone enhances the teaching of English Grammar skills; the paper also tested the following hypothesis: H_{01} : Smartphone English grammar apps (homophone apps) do not enhance the teaching of grammar skills. This study used qualitative and quasi research design. 100 teachers of English were selected randomly and 20 HODS (Head of Department) of English were selected purposively across the 13 sub counties from Kakamega County. Participants from 2 public secondary schools were divided into control ($n = 140$) and experimental ($n = 136$) groups. The questionnaire was subjected to teachers of English while interview schedules were subjected to HODS of English department. Independent t-tests were carried out on 276 form 4 students. Data was analyzed through Statistical Package for Social Sciences (SPSS 28.0). The interview guide was analyzed under themes. Data was presented through frequency, percentage and means. Study findings of independent t-tests revealed significant improvement in pronunciation skills for the experimental group. The results indicated that integration of Smartphone enhances the teaching of grammar skills. The study made the following recommendations; KICD and educators should incorporate Smartphone as a resource for teaching English Grammar.

Subject Areas

Linguistics

Keywords

Integration, Smartphone, Resource, English Grammar

1. Introduction

Instructional resources play a critical role in teaching of English grammar. [1] observed that grammar is a set of rules dealing with the syntax and word structure of a language. To develop competence and proficiency in language among learners, the teachers of English should explore a wide range of quality grammar resources. In Kenya course books are the main resources used by teachers of English. Other approved English grammar resources are TV, radio, computers, class readers, set-texts and newspapers. Digital resources have not been fully utilized by teachers of English. Smartphone, being the subject of the study, is a digital tool owned by teachers of English. Though the Ministry of Education (MOE) has prohibited phones in schools, this can be reversed to allow digital resources in schools. The Smartphone can complement the approved grammar resources to enhance teaching of English grammar skills. Teachers of English can access a wide range of grammar content, activities and exercises via Smartphone apps like visual dictionary which offers both meaning and audio pronunciation of words. Grammar is paramount to learning and acquiring the language. Therefore, with varied resources, teachers will be able to expose learners to a wide context of grammar.

The availability of quality resources for teaching grammar plays a crucial role in helping students perform well in national examinations, develop proficiency and be able to fit in the global village and demonstrate their grammar competencies. [2] highlighted the various resources that have been approved for teaching grammar. For instance, English course books play a significant role in teaching grammar. Course books are specifically designed to cover essential grammar topics and provide a structured approach to learning. The study, to complement course books, examined how digital resources like Smartphone can be used as teaching resources for English grammar. [2] defined a teaching resource as a material or tool that is designed to help facilitate learning and knowledge acquisition. Teaching resources are those resources that teachers use to assist learners in meeting learning and teaching expectations. [3] observed that resources are materials used by teachers to complement classroom instruction in learning. Teaching resources include any type of material or technological support that facilitates or encourages the teaching and learning process. The study observed that Smartphone is a digital resource that can complement the course books in teaching English grammar skills.

[4] views Smartphone as a cellular phone integrated with a computer and other

features unrelated to telecommunication, an operating system, web browsing, and software application running abilities.

Teachers can access English grammar APPS for free or even buy those deemed valuable. Many studies have been conducted to prove the efficacy of Smartphone, for example, [5] investigated the use of Smartphone applications for students to learn ESL grammar vocabulary. Results revealed that Smartphone apps provide a great opportunity to utilize technology to teach ESL (English as a second language). The study focused on grammar vocabulary. The current study looked at Smartphone features and English grammar apps that facilitate teaching of various grammar skills. The scope of the study is wider in the sense that all the apps having grammar content can be accessed by teachers of English for effective delivery.

Kenya Institute of Curriculum Development (KICD) [2] approved several resources like English course books, dictionaries, and class readers, and prepared grammar lessons to be aired on TV and Radio, in line with the [6] English syllabus revised in 2006. The use of the Smartphone which the study is keen on making its contribution to modern digital devices may enhance the teaching of English grammar to complement KICD recommended resources for teaching grammar. Text-books and printed materials may not be up-to-date since course book takes around 5 - 6 years before they are revised.

Smartphone has a variety of features like access to the internet and storage of downloaded content that support teacher's, preparation of English grammar lessons. [7] observed that there are very many free grammar apps on parts of speech, phrases and clauses. They offer an efficient way for teachers to do a lot of research, for effective lesson preparation. Although the advantages of using Smartphone are improving everyday to overcome the disadvantages, teachers may face some challenges, such as connectivity and cost of data bundles; however, schools will need to procure Smartphone the way they procure other teaching resources.

With creativity in teaching, teachers can use Smartphone features to create their own interactive grammar and vocabulary exercises. Smartphone as a grammar resource is more versatile, portable, flexible and easily accessible to teachers. With the transition from 8-4-4 to CBC the focus will be on the learner doing everything with minimal guidance from the teacher. Language teachers will be expected to be more creative and innovative. This makes the current study very relevant to the teachers of English. Complementing the current grammar resources with the Smartphone will prove very beneficial to the teaching and learning of grammar which can provide more insight into English grammar.

In brief, Smartphone will give teachers time to interact beyond course books. This will only be possible if the MOE or schools can procure Smartphone, just like the tablets were procured for Primary school pupils in grade One.

[4] observed that resources for teaching grammar in the first world are advanced, especially through modern technologies like Smartphone, which poses a challenge to most language teachers since they need to know how to implement Smartphone into the process of teaching grammar. The Teachers Service

Commission (TSC) has not been left behind, and it has been encouraging teachers to become more innovative in their service delivery and to, “inject new ideas and approaches”. [8] expects the secondary teacher to use instructional resources so as to meet individual learning needs effectively. In essence, teachers are supposed to seek ways and means to practice at all times using whatever available resources at their disposal. As a response to COVID-19 disruption, a few teachers tried their best to offer digital resources guided by the Remote Teaching Manual [9].

This is an indicator by the TSC that Smartphone can prove to be a good resource for teaching English grammar. There are very many trusted sources of digital content that teachers can use, among them the Kenya Education Cloud, “The cloud” is a server that is accessed over the internet and the software and databases that run those servers. [10] observed that teaching and learning resources are no longer confined to textbooks but are accessible online through computers and mobile devices. [11] noted that there is a drift away from the physical resource like libraries and now access to the same resources is possible virtually. The KEC, the Kenya Education Cloud, is a platform where the teacher can access approved grammar resources for teaching and learning. Low uptake in the cloud is associated with lack of awareness and exposure to KEC [9]. Course books will also be accessible by teachers of language using Smartphone. It shows that in the future, Smartphone will be a useful resource in teaching grammar.

Among others, [12] has developed various kinds of digital content. Some are packaged in compact disks, whereas some were open for use through radio broadcasts on KBC English Service, EDU TV Channel, and Kenya Education Cloud. It is important to note that digital content by KICD, broadcasted by KBC or EDU TV and those uploaded to the KEC, is to ensure KICD provision of digital content, ensuring access and equity in digital content through the use of radio, EDU Channel, and Kenya Education Cloud, and quality assurance of digital content. Promote utilization of digital devices in teaching. However, the beauty is that Smartphone can easily close the gap, as a resource for teaching grammar. Teachers can access the KICD content on English course books as part of the wide content they can browse on different sites. This therefore puts Smartphone ahead of other grammar resources like textbooks, dictionaries, radio, and TV due to their advanced and teacher-friendly features.

According to [9], teachers have been given more roles to ensure digital tools are used in teaching and learning. Hosting online or phone-based group learning conversations can promote the utilization of digital devices in teaching and learning. The study becomes very relevant as it tries to close the knowledge gap on alternative grammar teaching and learning resources. It is important also to point out that MOE had also created district language centers on sub counties all over the country to provide and support language resources as cited by [13] but these centers have fizzled out with time. This is an indicator of shifting from physical print to digital tools.

The current paper on Smartphone will complement the inadequacy of course

books, TV and Radio by offering wide range of grammar content available on internet via Smartphone. Smartphone will offer a complementary role to English recommended grammar resources.

1.1. Statement of the Problem

English grammar resources form the basis of teaching grammar skills in secondary schools. English being a global language modern quality digital resources like Smartphone should be integrated to enhance grammar teaching. Teaching of English grammar depends on various issues key among them are the resources. In Kenya there is overdependence on course books. Teachers of English have been accustomed to English course books; this trend needs to be complemented by modern digital resources like the Smartphone which can offer more grammar content, activities and exercises. The problem can be stated as: Can Smartphone complement traditional English teaching resources?

1.2. Significance of the Study

The importance of the present study emanates from the fact that our world is changing and technology is affecting everybody. English is the language of technology and communication globally. The need for digital resources to teach grammar cannot be overlooked. Moreover, the communications revolution, followed by the huge usage of social networking, has left its impact on every walk of life. The impact of the use of mobile phones is being felt in our lives today, as almost every person has a phone if not all. The current research is an attempt to shed light on the integration of Smartphone as an instructional resource for teaching grammar. Currently, social networking sites that teachers can use through their mobile phones can help teachers enjoy easy access to the internet through their phones thus enabling them to make use of learning resources that had not been within reach in the past and which might cater for the limitation of the classroom English grammar textbooks. Besides, the present study is an attempt to fill the knowledge gap in English grammar resources.

2. Related Literature

Integration of Smartphone as an Instructional Resource in Enhancing the Teaching of English Grammar Skills

Many studies have been conducted abroad on the use of Smartphone grammar apps. [14] investigated the use of Internet resources in teaching English grammar in schools in Kazakhstan. The subjects were fifty students and nineteen school teachers of English. The results showed that teachers used Internet grammar resources in English lessons. Furthermore, it was found that teaching the students with internet grammar resources is effective and that it improves their knowledge of and skills in grammar. The current study exploited several Smartphone features like downloads and installation via the Play Store and apps.

[15] evaluated the efficiency of using Smartphone applications in teaching the

English language to Al-Majd secondary school students in Riyadh. The research only focused on the Apple's i-Phone applications because they provide and support educational applications. One example for the educational application used was the COOL SPELL application. Additionally, thirty students at Al-Majd private secondary school joined the process. They divided them into an experimental group using an application for two weeks. There was a pre-test and a post-test in regard to the student's performance. The result in this study was that there was a statistical difference in spelling tests both before and after using the application. Finally, the result indicated that using Smartphone applications positively influences students' performance. The study used experimental design while the current used mixed methods. The current study also looked at various grammar apps like grammar bytes, visual dictionaries and homophone app.

[16] Examined support in learning vocabulary and grammar through the use of Puzzle apps. The puzzle apps involved the games that undertook a problem-solving approach, such as logic, pattern recognition, sequence solving, spatial recognition, and word completion. The puzzle apps consisted of web-based mini-games, interactive jigsaw puzzles, and card design games. Eight studies indicated that puzzle apps caused learning gains in grammar and vocabulary learning. The research examined one grammar app. The current study examined a variety of grammar apps used by teachers of English, including tense and grammar checkers.

[17] reported that the ESL students in their study who used the app Clue Finders Reading Adventures for 40 minutes a day for four weeks to supplement their English lessons showed improved vocabulary and grammar skills. Another study, by [18] found that EFL students' vocabulary, in terms of spelling, was improved after using puzzle apps such as Hangman, Spelling Bee, First Hand and Concentration games. Learning outcomes from using the games showed that EFL students focused on spelling had improved short-term recall and retention of spelling through the pupils' using the apps. Current study used grammar apps on the ESL students.

Furthermore, [19] investigated digital game software SHAIEX, a hypermedia adaptive system as a tool for teaching languages to children, results in a considerable impact on the vocabulary acquisition of advanced EFL learners. Moreover, [20] concluded that when middle school EFL students used a 40 minutes homophones app for Detective ABC, a vocabulary app, their total vocabulary scores improved. Qualitative methods were used in current study to obtain teacher of English opinion toward grammar apps, and a homophones app was also designed for quasi experiment on ESL learners during one month. For example, [21] indicated that ESLs learning L2 words in online game "Among Us" in four sessions in two different weeks would hold words for better retention. In current study, a month was utilized to teach using homophones app.

[16] reviewed 53 apps for English learners. The review found that, overall, quality was low. Narration was present in most of them (58%), but additional features

to facilitate EL students' language learning such as automatic translation to another language, or the use of visuals were generally absent. The review informed the current study on challenges of Smartphone.

[22] noted that the use of Smartphone in grammar teaching provides teachers with greater access to a wide range of teaching resources. Teachers can access grammar apps, online tutorials, interactive exercises and authentic language materials anytime and anywhere. The use of Smartphone in grammar teaching has the potential to increase student engagement and motivation. Interactive grammar apps can make learning more enjoyable and immersive. Students are more likely to be motivated when they have access to interactive activities on their Smartphone, leading to improved participation and active learning. Smartphone provide access to authentic language resources, such as real-world texts, videos and social media platforms. Integrating these resources into grammar teaching helps students understand the practical applications of grammar in real-life contexts. It promotes a deeper understanding of how grammar structures are used in authentic communication therefore enhancing students' language proficiency and communicative competence. In Kenya, Smartphone are rarely used for teaching grammar, and the findings create a gap for the current research where integrating Smartphone into teaching grammar may prove worthwhile.

The teacher has a great role to play in using Smartphone as a key resource in teaching grammar. The teacher can subject the learners to the best grammar apps when teaching English Grammar using the Smartphone. [23] noted that Smartphone do not solely provide language learning opportunities, but they also support students with enough chances for exercises which incorporate the four main language skills cited in [24] Smartphone use in language learning can be of great benefit, especially in language acquisition, spelling and pronunciation, grammar, listening and reading skills. To be able to communicate effectively, learners have to master a large number of words, they need to practice listening to gain knowledge in pronunciation, and they also need practice in reading and grammar. The studies are similar to the current study which is done in Kenya; however, most of them have investigated on just one grammar app. The current study has examined a variety of English grammar apps and Smartphone features that enhance grammar teaching. The other studies emanated from Western countries which have advanced in digital space unlike to Kenya. The studies assisted in identifying the gap for the current study. The studies pointed out the need to incorporate Smartphone in teaching grammar, which the current paper has addressed.

3. Research Design

A qualitative and quasi research design was used. [25] observed that a mixed-methods research design has both philosophical assumptions and methods, it has philosophical assumptions that guide data collection and analysis from different sources at a time within a single study. In other words, using quasi (pre and post test) and descriptive design helped to answer the questions on the use of

Smartphone to improve the understanding of teaching English grammar with adequate depth and breadth. The quantitative data from pre and post tests on homophones provided breadth to the study while the qualitative from questionnaire given to teachers of English and the interview schedule for HODS of English provided depth. Again, quantitative results of the experimental groups were triangulated with the qualitative findings from the questionnaire and the interview schedules. [26] observed that, research that employs mixed method research (MMR) is seen as purposeful data integration whereby the close alignment of quantitative and qualitative methods allowed the researcher to get a better, wider picture of the study.

The study gathered data from teachers of English language where questionnaires having both open and closed-ended questions were administered to teachers of English and the Heads of the Department of English language were interviewed. The teachers and HODS were randomly selected across Kakamega County. Observation checklist was used to make observations on resources that are domiciled in the language department, library and teachers of English.

The quasi data was gathered through pre and post-tests that took one month. The instructional instrument, the homophone Smartphone application, was designed and implemented for the experimental group. Both the experimental group and control group had the same homophone contents. The experimental group was taught using the homophone app. control group was taught using the English course book (syllabus). Both the pre-test and post-test written tests were constructed and used to investigate whether there was a significant improvement in students' pronunciation after the treatment. The research population included 140 form 4 students from school 5 and 136 form 4 students from school 8. The experimental group (N = 136) and control group (N = 140) were selected through convenience sampling from the county schools. The English proficiency levels on homophones of both groups were comparable, as evidenced by the exam results from the pre-test, with 60.23 as the mean score for the experimental group and 59.25 for the control group. The two data sets were integrated during presentation of findings.

4. Findings and Discussion

4.1. How Integration of Smartphone Enhances the Teaching of English Grammar Skills

This section responded to the objective of this study which was to examine how the integration of Smartphone as an instructional resource enhances the teaching of English grammar skills. The teachers of English responded to two areas, namely grammar skills that area improved when integrating Smartphone and the features that facilitate teaching of the grammar skills.

4.2. Skills That Are Improved When Smartphone Is Integrated into the Teaching of English Grammar

Teachers of English were asked if the integration of Smartphone in their teaching

of English grammar improved learners' grammar skills. The results are as tabulated on **Table 1**.

Table 1. Skills that are improved when Smartphone is integrated in teaching of English grammar.

English Grammar Skills	Agreed		Disagreed		Total Frequency
	Frequency	Percentage	Frequency	Percentage	
Pronunciation	40	71%	16	29%	56
Tenses	45	80%	11	20%	56 m
Conjunctions	42	75%	14	25%	56
Clauses	40	71%	16	29%	56
Spellings	43	77%	13	23%	56

From **Table 1** (71%) of the respondents agreed that the integration of Smartphone in teaching English grammar improved pronunciation. There are very many English apps like visual dictionaries that show meaning of words and give audio pronunciation of words by native speakers. 16 (29%) disagreed cited lack of interest and passion to use Smartphone to access grammar content. 45 (80%) of the respondents agreed that Smartphone integration in teaching English grammar improved tenses. Tenses form bulky of grammar; there are various tense apps online that teachers agreed to access via YouTube. 11 (20%) disagreed and argued that it is demanding to gather online content on tenses therefore they rarely teach using Smartphone. 42 (75%) of the respondents did agree that Smartphone integration in teaching English grammar improved the use of conjunction. The respondents noted that there are a lot of exercises and activities on conjunctions that can be utilized to enhance teaching of grammar. 14 (25%) disagreed and reiterated that accessing conjunctions come with a cost as a result they don't integrate when teaching. 40 (71%) and 43(77%) agreed that Smartphone use in teaching English grammar improved the use of clauses and spelling. This was attributed to frequent access to grammar apps. The apps are designed by various language experts. 16 (29%) and 13 (23%) did disagree respectively on the use of clauses and spelling and noted that they cannot ascertain the authenticity of app content.

This was interpreted to mean that the integration of Smartphone in teaching English grammar improved learner skills like pronunciation, tenses, conjunctions, clauses and spellings among others. These revelations indicated that teachers of English accessed grammar apps to teach English grammar. The results are also parallel to those of [17] who mentioned that their ESL students improved their vocabulary and grammar while playing the Clue Finders Reading Adventures app for their English lessons. Another study was conducted by [18] cited in the Digital Learning Research Hub. The study revealed that EFL students achieved improvement in vocabularies, especially in spelling performances, after they used such

puzzle apps like Hangman, Spelling Bee, Fast Hand and Concentration games. Results in learning with these puzzle apps show that EFL students improved in how much they could recall and retain in spelling tasks.

In addition, [19] proved that the digital game software SHAIEX was a type of adaptive hypermedia system, hence, it is also useful to continue the earlier trend of teaching languages to young ones, tremendously affecting the way learners of English as a Foreign Language (EFL) acquire vocabulary by intermediate level.

[20] also reported that the vocabulary scores of my middle school EFL students as a whole improved significantly after they used the Detective ABC app. [21] discovered that ESL students who used new L2 words within the context of the online game Among Us retained more vocabulary words than Among Us players who had only encountered them.

4.3. Features on Smartphone Used to Facilitate Teaching of English Grammar

Smartphone has a number of installed features; however, teachers of English were asked about features on Smartphone that they use to facilitate the teaching of English grammar skills. **Table 2** shows their response.

Table 2. Features that facilitate teaching of Grammar.

Features of Smartphone	Yes		No		Total Frequency
	Frequency	Percentage	Frequency	Percentage	
Access to internet	50	89%	6	11%	56
Download/storage	55	98%	1	2%	56
Play store (installing of apps)	54	96%	2	4%	56

From **Table 2**, 50 (89%) of the respondents agreed that teaching English grammar has been made easy due to access to grammar content and activities via the internet against 6 (11%) who disagreed and stated that it is costly. 54 (96%) of the respondents agreed that installing and subscribing to grammar apps via plays store though at a cost has enabled them to access wide content, exercises and activities that enrich grammar teaching. 2 (4%) disagreed that some grammar apps take long to be installed which proves to be costly as a result teachers fail to use such features. 55 (98%) did agree that the ability of Smartphone to download and store grammar materials has made the work of teaching grammar convenient since the teacher can prepare adequately. 1 (2%) argued that they needed good Smartphone with enough storage capacity.

These results were interpreted to mean that teachers of English access and use Smartphone features to enhance the teaching of grammar skills. The findings corroborate with [22] study that noted use of Smartphone in grammar teaching provides teachers with greater access to a wide range of teaching resources through

the internet. Similarly the findings concurred with the findings of [14], which noted that internet as a feature of Smartphone can offer access to a variety of English grammar apps.

Interview was also conducted to substantiate findings from the questionnaire. Section B of the interview schedule examined the integration of Smartphone as an instructional resource in enhancing the teaching of English grammar skills. HODS were asked on features of Smartphone and grammar skills taught by teachers.

HOD 1 said that;

“Teachers access grammar content using Smartphone where they download and install grammar Apps from the internet.”

This response was supported by HOD 10 who said that;

“The teachers agreed that the Smartphone has features like access to the internet, installation of Apps which teachers agreed that they use to access grammar content and activities to teach English grammar”.

HOD 20 said that;

“The teachers agree that they use their Smartphone to access skills like punctuation, pronunciation, tenses, conjunctions, clauses, spelling etc. They also revealed that grammar skills have specific Apps on their Smartphone like punctuation checkers and grammar bytes”.

Similarly, HOD 19 said that;

“Teachers normally download grammar apps like Puzzle App, Quiz Apps and Simple and Compound sentence apps which they use in sharpening the learner’s spelling skills, pronunciation skills, conjunctions skills, tenses, clauses among many other skills. That improves learners understanding of English grammar”

The findings from interview responses revealed that Smartphone have features like the ability to download grammar apps, access to the Internet and the ability to install grammar apps. The apps have grammar content to be taught like punctuations, simple and compound sentences, conjunctions, tenses, etc. This helps the teacher of English to prepare enough grammar skills for teaching.

The findings are the same as [22] findings that noted the use of Smartphone in grammar teaching provides teachers with greater access to a wide range of teaching resources through the internet. Teachers can access grammar apps, online tutorials, interactive exercises and authentic language materials anytime and anywhere.

The findings concur with [14], finding that focused on using the Internet feature of Smartphone to access English grammar resources. The findings indicated that it is effective to teach students by using internet grammar resources and it improves their grammar knowledge and skills. Observation was also undertaken in the 20 schools. In 15 of the observed schools, all teachers of English owned a Smartphone. Only 6 teachers of English lacked Smartphone in the remaining 5 schools. This implied that the majority of teachers of English own Smartphone that they use as instructional resources for teaching English grammar. However, the models differed. **Table 3** summarizes data.

Table 3. Observation checklist on availability of Smartphone in the 20 schools.

Schools	Number of Teachers of English	Available		Unavailable	
		Frequency	Percentage	Frequency	Percentage
1	3	3	100%		
2	5	5	100%		
3	3	2	66.7%	1	33.3%
4	8	8	100%		
5	12	10	83.3%	2	16.7%
6	4	4	100%		
7	5	4	80%	1	20%
8	11	11	100%		
9	10	10	100%		
10	7	7	100%		
11	7	6	85.7%	1	17.3%
12	7	7	100%		
13	14	14	100%		
14	6	6	100%		
15	6	6	100%		
16	5	5	100%		
17	10	10	100%		
18	11	10	90.9%	1	9.1%
19	12	9	100%		
20	10	10	100%		

Table 3 shows that averagely over 80% of the respondents who were observed owned a Smartphone which was associated with teaching of grammar skills. The presence of Smartphone implied that teachers of English grammar can customize the Smartphone as a resource in enhancing teaching of grammar skills.

4.4. T-Test on Experimental Groups

The study also conducted T test to compensate weakness that may have arisen from the qualitative findings on grammar apps that enhance teaching of grammar skills. Two public schools were involved in the experiment that took one month.

The hypothesis below was tested to find out whether Smartphone grammar apps (homophone) enhance teaching of English grammar.

H_{01} Null Hypothesis English grammar apps (homophone apps) do not enhance the teaching of grammar skills.

There was a significant difference between the Control group and the experimental group according to **Table 4**. The pre-test of the Control group did not yield any significance that resulted in $M = 59.34$, $SD = 9.6$, and that of the score of the

experimental group, which resulted in $M = 60.55$, $SD = 10.3$. This test denoted the mean difference in the pre-test between the control and experimental groups. For instance, the post-results of the two groups' values, $M = 72.76$, $SD = 7.73$ and $M = 61.25$, $SD = 8.52$ indicated improvements when compared to the pre-test results. The experimental group was able to realize a high score compared to the control group. The pre-test showed that the control group had a mean score of $M = 61.25$, $SD = 8.52$, lower than the experimental group, which had a higher mean of $M = 72.76$, $SD = 7.73$. All in all, these results showed no significant difference between groups in the pre-test and a significant difference between groups in the post-test, with the experimental one performing significantly better. Therefore, the treatment helped in the improvement of the pronunciation of the student. The overall results of pre and posttests support the data for the responses in the interview as well as the questionnaire which showed that grammar app enhances teaching of grammar.

Table 4. Control group and experimental group.

Application	Group	Pre-test			Sig	Post-test			Sig
		N	M	SD		N	M	SD	
Homophones	Experimental	136	60.55	10.3	0.442	136	72.76	7.73	0.000
	Skills Control	140	59.34	9.6		140	61.25	8.52	

The findings corroborate with [24] who said that Smartphone use in language teaching can be of great benefit, especially in teaching spelling and pronunciation, grammar, listening and reading skills. To be able to communicate effectively, learners have to master a large number of words they need to practice listening to gain knowledge in pronunciation, reading and grammar.

5. Conclusion

Integration of Smartphone as an Instructional Resource to Enhances the Teaching of English Grammar Skills

The first finding revealed that the integration of Smartphone in teaching English grammar improved learner's grammar skills like pronunciation, tenses, conjunctions, clauses and spellings among others.

The second finding revealed that Smartphone has advanced features that enable teachers of English to teach English grammar.

The third finding from the pre and post tests indicated that English grammar apps enhance teaching of grammar skills. The study concluded that teachers in schools used Smartphone as an instructional resource in teaching English grammar. Integration of the Smartphone was because of the advanced features like access to the internet, and access to Apps.

6. Recommendation

KICD and MOE should approve more digital resources like Smartphone to teach

English grammar and empower teachers on how to integrate Smartphone into teaching of English grammar.

Conflicts of Interest

The authors declare no conflicts of interest.

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