

EFFECTS OF SCAFFOLDING ON INTEREST TO LEARN ENGLISH AMONG SECONDARY SCHOOL LEARNERS IN KENYENYA SUB-COUNTY, KENYA

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Abstract: The process of language learning calls for a learning method which not only makes learners active participants in the learning process but also makes them enjoy as well as develop interest in the language skills they learn. Studies have advocated for scaffolding as an appropriate method to learn English as a subject. However, in Kenya sub-county, scaffolding is minimally utilized during English lessons, hence, there is scanty literature on the effect of scaffolding on learners' subject interest. Thus, the purpose of the study was to investigate the effects of scaffolding on interest to learn English as a subject among secondary school learners. The study was informed by cognitive load theory as built upon information processing theory. Sequential explanatory design within the mixed methods approach was adopted, involving Solomon-four non-equivalent quasi experimental group design in quantitative data collection and interviews for qualitative data collection. The target population was 78 teachers of English and 2678 form three students (2022 class). The sample size constituted 364 students and 10 teachers, purposively sampled for quantitative data collection, followed by 10 teachers and 10 learners selected by simple random sampling as interview respondents. Quantitative data was analyzed using mean, standard deviation and paired samples t-test whereas qualitative data was analyzed thematically. Results showed that the posttest mean scores of subject interest among the experimental groups were higher than those of the control groups. The paired samples t-test showed a statistically significant effect of scaffolding learning on subject interest. From qualitative data, the study established that scaffolding led to an improvement in interest to learn English among learners. The study concluded that scaffolding was the most appropriate language learning technique as it was very effective in boosting learners' interest to learn English.

Keywords: scaffolding; subject interest; learning process; teaching technique.

1. INTRODUCTION

Language learning, just like language acquisition is a process and so it should be treated in the classroom as learners acquire new language skills (Boundless, 2016). This is because in the classroom language is the tool kit for intellectual activity (Mercer, 2018). With this respect, English language should be learned rather than taught and learning should actually be process based, as students learn through social interactions with more skilled peers and adults, through scaffolding (Sarikas, 2020), through scaffolding; the support given to a student that enables them to solve a problem, carry out a task or achieve a goal that would be beyond his unassisted effort (Van de Pol, Mercer & Volman, 2019). The process involves a more knowledgeable person demonstrating to learners how to tackle a learning task and later allowing the learners to do the rest on their own while the more skilled person offers support where necessary (West, Swanson and Lipscomb, 2019). Scaffolding learning enables learners develop subject interest (Anisa & Sutapa, 2019). Achieving good learning outcomes involves interests which significantly influences learning motivation (Herpratiwi & Tohir, 2022). Students with subject interest develop attentiveness or the curiosity when learning a concept in the subject as displayed through learners' active participation in the classroom processes, showing that the students derive fun and enjoy the processes (Vanden Bos, 2015). Thus, scaffolding learning has been advocated for as the most appropriate language learning process.

Scaffolding learning process has been a solution out of many language learning challenges across the globe. For instance, the Ministry of Education (MoE) in collaboration with the Kenya Institute of Curriculum Development (KICD) came up with the Competence Based Curriculum (CBC) Framework in 2017. The CBC would be implemented gradually in basic education institutions (KICD, 2017). In the process of developing the CBC, the concepts of scaffolding and the Zone of Proximal Development raised by Vygotsky's Social-Cultural Development theory were found to be useful in designing the pedagogical shifts that teachers would be trained in, to facilitate adoption of the CBC in basic education (KICD, 2017). Activities in the classroom would include journaling, experiential and collaborative and cooperative learning (KICD, 2017, p16). Moreover, when teaching English several skills are intertwined and taught as a unit. These skills include listening, speaking, reading, writing (Kenya Institute of Education (KIE), 2012). The process can be really perplexing especially when handling a heterogeneous class emanating from slow to fast learners, and learners from diverse first language backgrounds. This calls for scaffolding (KICD, 2017).

Consequently, Omuna and Syomwene (2020) noted that the performance of English in KCSE had remained poor between 2013 and 2018 due to teachers' failure to use appropriate instructional approaches if scaffolding is embraced, there would be improvement. Also, Muriithi and Njuk (2021) pointed out that teaching strategies play a major role in influencing learners' performance. The study advocated for student-centered approach so as to give the learner time to participate in class and improve the learners' ability to recall (Muriithi and Njuk 2021). A great percentage of teachers (50%) preferred discussion method which ensured every learner got involved while 25% preferred lecture method. However, the application of discussion method faced challenges since the number of students was large leading to adoption of poor teaching methods such as lecture method as opposed to discussion and other learner centered methods. Thus, discussion method which was advocated for, and which is one of the scaffolding techniques was preferred but evidently it was not being employed effectively in teaching English given large class sizes. Nevertheless, learner centered methods are the only solutions to the teaching of English as subject in Kenya.

Further, in Lang'ata sub-County, Kenya, Atandi, Gisore and Ntabo (2019) revealed that teacher centered methods were employed in the language classrooms. Lecture method is the most preferred method in Kenya by 19.5% of the teachers, followed by question and answer method at 16.4 %, group work 14.4%, demonstration 12.9%, guided learning 12.8%, drilling and questioning 12.3% while role play and dramatization is practiced by 11.6% of the teachers (Atandi, Gisore & Ntabo 2019). Thus, teachers used teacher centered methods to a large extent while learner centered methods were used to a small extent (Atandi, Gisore & Ntabo, 2019). The use of teacher centered methods denied learners the opportunity to study independently and discover new knowledge on their own. On the other hand, learner centered methods such as demonstration and guided learning which are elements of scaffolding made learners develop interest to discover and learn new concepts on their own.

The challenges were replicated in Kenyenyia Sub-County, Kenya, where Maiko (2018) reported teacher centered methods being utilized in English lessons more than learner centered method, thus interfering with the psychological well-being of the students. 55% of teachers employed lecture method, 15% discussion while 35% used other methods to teach English. The lecture method adopted by a majority of the teachers made students remain passive and receptive and not in control of their learning. However, even if the teachers employed these methods, 50% of the teachers admitted that learner centered methods such as scaffolding could make learners develop a positive attitude towards English as a subject as well as build self-efficacy, which in turn would make the students perform better in exams. Further, 30% of teachers conceded that teacher centered methods encourage laziness and negatively affect students' performance (Maiko, 2018). For students to perform better, they must have interest in the subject by enjoying the process and having fun in the learning process. They should be actively involved in the process and be given a chance to collaborate and discover new learning ideas, as well as assist one another as they learn. Scaffolding learning process makes it possible for learners to participate actively in learning and hence develop interest in learning English.

2. THEORETICAL FRAMEWORK

Cognitive load Theory

Cognitive Load Theory (Sweller, 1988), which builds upon Information Processing Theory (Miller, 1956) guided the study. Information processing theory outlines three information processing functions: sensory memory, working (short-term) memory and long-term memory. Sensory memory filters important information out of all the information that we perceive through our senses and passes the important information to the working memory. The working memory can hold 5 to 9 chunks of information at a time, hence has limited capacity (Miller, 1956). The working memory discards or processes

information and sends it to the long-term memory where the information is stored in knowledge structures known as ‘schemas’ (Miller, 1956). The concept of chunking and the limited capacity of the working memory is the basis upon which the Cognitive Load theory (Sweller, 1988) is built.

Thus, Cognitive Load relates to the amount of information that the working memory can hold at a time, which is 5-9 chunks. Cognitive Load Theory suggests that learners can absorb and retain information effectively if the information is provided in such a way that it does not overload the working memory or the mental capacity of the learners. Sweller (1988) argues that if a lot of information is provided to the learners at once, the students will most likely lose it since the information cannot fit in the working memory of the learners. For this reason, when teaching cognitively complex or challenging material, teaching techniques should be acquired to reduce the working memory load in order to facilitate the changes in the long-term memory associated with schema acquisition (Sweller, 2003).

Cognitive Load theory (Sweller, 1988) informs the present study in that learning English is complex and it involves a lot of cognitive activities since several language skills are integrated and learned as a unit. Learning of English entails listening, speaking, reading, writing and critical analysis skills, which can be cognitively challenging. Therefore, there is need to apply sound instructional strategies based on the capacity of the learners’ memory. The material to teach the language skills therefore need to be designed in such a way that it fits the capacity of the working memory of the learners; within the learners ZPD. When students are given content that is within their ZPD, the students will develop interest in the subject and will participate actively in the learning processes. As a learner develops interest, the learner will be in a position to exploit the material in their ZPD by assisting their peers. In the process, the learner will move to a higher ZPD and learning will continue. Thus, scaffolding, the ZPD together with the correct cognitive load will bring about a learner’s interest to learn.

3. RESEARCH METHODOLOGY

The study adopted the sequential explanatory design within the mixed methods approach (Creswell, 2014). Sequential explanatory design involved collection and analysis of quantitative data first followed by collection and analysis of qualitative. Quantitative data was collected using Solomon-four quasi experimental technique and qualitative data was collected using interview method. Both results were interpreted together.

Quantitative Phase

Quantitative data was collected using Solomon-four quasi experimental group design. Quasi experimental design was appropriate for this study because the researcher used participants in their naturally occurring groups which constituted the schools and the already existing classes. Solomon-four group design involved the researcher randomly assigning participants to four groups; two experimental groups that underwent the prescribed treatment of scaffolding learning technique and two control groups which were not taught using scaffolding but served as the benchmarking point for comparison (Levy and Ellis, 2011). Table 1 shows Solomon four group design.

Table 1: Solomon four Group design

Group	t1 (Pre-test)	t2 (Treatment)	t3 (Post-test)
Experimental grp 1	O1	X	O2
Control grp 1	O3	–	O4
Experimental grp 2	–	X	O5
Control grp 2	–	–	O6

Table 1 indicates that the researcher sampled the four groups and labeled them as Experimental group 1, Control group 1, Experimental group 2 and Control group 2. Two groups; Experimental group 1 and Control group 1 were pre-tested while the other two groups (experimental group 2 and control group 2) did not receive the pre-test. But experimental group 2 received the intervention. Finally all the four groups were post-tested (Sandler and Huck, 2015). Pre-test and post-test data from the four groups were then compared.

Qualitative Phase

Qualitative data was collected using interview technique. Interview method was appropriate for the study because the study touches on human psychological variables of subject interest hence the respondents were expected to give their own views,

feelings and experiences that would not be captured by the pre-test and post-test questionnaires. The respondents explained, supported as well as confirmed the statistically significant results that were obtained in Solomon-four experimental design.

Sample Size and sampling technique

With regard to Solomon-four research design, four schools were purposively selected for this study; two boys’ schools and two girls’ schools which had a total of 364 students. This is because the experimental technique dictates that the subjects must be in the same natural environment. Hence four groups had to be selected from their naturally occurring environments. Interview respondents comprised of 10 teachers and 10 learners, also purposively sampled.

Research Instruments

The present study collected quantitative data using pretest and posttest questionnaires and qualitative data using interview schedules.

Questionnaires

The questionnaire measured subject interest on 5-point Likert scale response and contained 12 five-point Likert items adapted from a study by Rotgans (2015) and Balbalosa (2010). Internal validity of the questionnaires was investigated by subjecting the students’ survey data to suitability tests using Kaiser-Meyer-Oklín measure of sampling adequacy (KMO Index) and Bartlett’s Test of Sphericity. KMO index for self-efficacy questionnaire was .788 > 0.6 and the Bartlett’s Test for Sphericity was significant ($p=0.000 < 0.001$). Reliability was tested using Cronbach’s Alpha with $\alpha = .793$

Interview Schedules

The interview schedule was constructed at the end of quantitative data collection and analysis through pre-post questionnaires as well as Solomon four group experiment. This is because the interview was meant to confirm, support or explain quantitative data findings at the end of the experiment. Therefore, the questions on the interview schedule were based on the findings of the study as guided by the study objective and survey questions. There were 6 questions on subject interest as based on quantitative data findings.

4. RESULTS

Comparison of Students’ Level of Subject-Interest before and after intervention

Learners in experimental group 1 and control group 1 filled in pretest subject interest questionnaires, followed by scaffolding learning among experimental groups 1 and 2 for eight weeks. This was followed by a posttest where learners in all the four groups filled in posttest questionnaires. Data was analyzed by comparing pre-test and posttest scores and the results tabulated on Table 2.

Table 2: Comparison of Pretest and Posttest Subject Interest Results.

Indicators	Intervention 1		Intervention 2	Control 1		Control 2
	Pretest	Posttest	Posttest	Pretest	Posttest	Posttest
I often ask questions in an English class	3.1	3.7	3.6	3.0	3.1	2.9
I often contribute to class discussions	3.4	3.5	3.6	3.3	3.4	3.4
I often make class presentations	2.9	3.6	3.5	2.9	2.9	3.0
I ensure that I complete my assignments before the next lesson	3.0	3.6	3.6	3.1	3.1	3.0
I do teach other students	2.8	3.4	3.2	2.6	2.7	2.7
I do consult the teachers when doing assignments	2.7	3.7	3.6	2.6	2.7	2.7
Learning English puts me in a good mood	3.4	3.5	3.5	3.4	3.5	3.4

When studying English, I get fully focused and forget everything around me	3.1	4.1	4.1	3.3	3.4	3.4
I always look forward to English lessons because I enjoy them a lot	3.2	3.7	3.5	3.2	3.3	3.3
I listen attentively to my teacher of English	3.1	3.8	3.8	3.1	3.1	3.2
I actively participate in the discussion, answering exercises and clarifying things I did not understand	3.2	4.1	4.2	3.2	3.2	3.3
I get frustrated when the lesson is interrupted or the teacher is absent	2.8	3.4	3.2	2.8	2.9	2.8
Mean rating of subject-interest	3.06	3.67	3.6	3.05	3.14	3.12

Table 2 reveals a considerable improvement in subject interest among learners who had been taught using scaffolding technique. For instance the response of learners to the frequency with which they asked questions during an English lesson improved significantly in the experimental groups as compared to the control groups which comprised of learners who were taught using conventional methods. In experimental group 1, the mean rate of how often the learners asked questions in an English class was at 3.1 during pretest and at 3.7 during posttest stage, signifying a considerable change in rating. This rate is comparable to that of experimental group 2 of 3.6. However, the control groups which were not exposed to scaffolding learning exhibited low mean rates; control group 1 had a pretest mean of 3.0 and a posttest mean of 3.1 whereas control group 2 had a mean rate of 2.9. The study therefore established that the students who were taught using scaffolding technique improved significantly in the rate at which they asked questions during the English question, which clearly indicated that scaffolding method had a positive effect. Interview respondents also gave their thoughts on the improvement on the rate at which students asked questions:

For the time I have employed the new method, the students are asking a number of questions. Those students who have been dull and shy are emulating their active counterparts. Some even ask questions outside the classroom and this is quite encouraging.

I think the new method has exposed the learners unlike the other methods where they receive only what I give them. Now they can discover on their own. They remind me, especially in literature, they remind me information, though in form of a question. For instance, "...is selfishness a theme in..." They are doing a lot of research in their groups and in the process they are coming up with so many questions which they ask in class.

I think the other methods deny them the opportunity to ask questions. If I dictate notes and they copy, will they be able to ask a question? In the new method, if they discover information that is not very clear to them, they ask a question so that I clarify for them. I think that is why the students are asking me more questions than they used to I the past. (ToE1)

Another respondent had this to say:

My students are more active in asking questions than ever. They are really enjoying the new technique, so, I think they are asking questions so that they do the right thing for fear of reverting to the old methods. The students do not want to mess. They want to be guided well so that they do perfect work. I think most of the questions they ask are for the purpose of guidance towards the right direction. At the same time, I think they want to compare my answer with theirs in order to confirm whether they are doing the right thing. (ToE2)

According to the responses in the extracts from ToE1 and ToE2, the study found out that scaffolding technique had a positive effect on the frequency with which the students asked questions in class. ToE1 explains why they think the students are more active in asking questions. According to the respondent, scaffolding technique has made students to discover new information on their own, and it on the new information that they base the questions they ask. At the same time, the conventional methods do not give students the opportunity to ask questions because the students believe the teacher is the

one to give them all the content they need. Toe2 also explains why there is improvement in the rate of asking questions. In their opinion, the students are enjoying scaffolding technique and for the fear of reversing to the old methods, they want to ask questions in order to do the right thing. Purposely, the students do not want to mess up the new good method. Likewise, on how often the students contributed in group discussions, there was some improvement in the intervention group 1 from a mean of 3.4 to 3.5. Experimental group 2 also attained a mean of 3.6. On the other hand, learners in control group 1 got a mean of 3.4 which dropped to 3.3 by the end of 6 weeks. Control group 2 who were not pretested achieved a mean rate of 3.4. The results show that learners who went through scaffolding learning contributed in group discussions more frequently than those who were taught using the normal teaching methods. Moreover, learners were asked to indicate how often they made class presentations and experimental group 1 improved from a mean rate of 2.9 to 3.6 while experimental group 2 learners attained a mean rate of 3.5. On the other hand, control group 2 students maintained a mean rate of 2.9 both in the pretest and the posttest as their control group 2 recorded a mean rate of 3.0. on whether the learners teach other students, there was an improvement in the mean rating in experimental group 1 from 2.8 to 3.4 while experimental group 2 got a mean of 3.2. However, control group 1 had a pretest mean of 2.6 and a posttest mean of 2.7. Control group 2 also recorded a mean rating of 2.7 showing no significant difference in the pretest and posttest mean rating in the control groups. On the same note, how actively they participate in the discussion, answering exercises and clarifying things they did not understand improved from a mean of 3.2 to 4.1 in experimental group 1 and 4.1 among experimental group 2 participants. On the contrary, control group 1 got a pretest and posttest mean of 3.2 while control group 2 got an almost similar posttest mean of 3.3. These findings show that those students who were learned using scaffolding technique made class presentations more often than those who learned using the normal techniques. Moreover, interview respondents were probed on the frequency with which the English language learners contributed in discussions and made presentations. The following extracts were obtained:

I often encourage my learners to form discussion groups and they normally have a chair who ensures that every member contributes in the discussion. Therefore participation is mandatory for all members.

Presentations are normally made by the secretary of each discussion group. But since I introduced the new method, my learners are making group presentations in turns. I can say they are enjoying the discussions as well as the presentations. I think this is because, unlike when we give them a topic or a question to discuss, this new method requires that I allow them to identify their areas of weakness on their own and tackle them. I think this is what has given my learners confidence because they do what is within their ability. (ToE1)

Similar remarks were made by another respondent:

Discussion groups have been functional but of late the groups are more active, I think because I have given my students enough time to do their studies. I have given my learners the opportunity to pick a topic or a question and they discuss and I may or may not be present during their discussions. The chair of each group ensures that as many learners as possible contribute during the discussion.

About class presentations, the learners are more active. They can present what they discussed. They can also present items such as poems as well as reading aloud. I think the learners are more active because nowadays I am not forcing them to do topics they don't enjoy. I have allowed them to choose the topics and questions for discussion. I think, the new method has made learners believe in their abilities. They are no longer shy or afraid. (ToE2)

Another respondent also noted a difference in the English language learners.

Nowadays I am very active in group discussions. We have organized ourselves well. We do research on the topics we are given and we bring the points we have got. So I have to contribute during the discussions. If the point I have brought is not correct, my group members help me. That is why I have to raise the points without fear. (LoE3)

According to the extracts from ToE1, ToE2 and LoE3, learners participate in class discussions which are done in groups. The respondents go on to explain that the chair of each group performs the role of selecting the group members who make contributions during the discussion. This explains why the mean rate of contributions is not much different between the pretest and posttest. Moreover, the respondents ToE1 and ToE2 express that they give their learners opportunities to select the topic or question that they want to discuss. LoE also admits that for the learners to benefit from cooperative learning, they have to actively make contributions during group discussions because they assist each other. This could suggest that

during the application of scaffolding technique the English language learners select the material within their Zone of Proximal Development. For this reason, the mean rate of making class presentations significantly increased between the pretest and the posttest.

In addition, the learners' level of focus improved significantly; this was shown by the fact that when studying English before the exposure to the treatment, learners' ability to get fully focused and forget everything around them was rated at 3.1 but after exposure to the scaffolding technique the rating improved to a mean of 4.1 among the experimental 1 participants. Also, experiment group 2 recorded a similar mean rating of 4.1. However, control group 1 made an insignificant difference from 3.4 in the pretest to 3.5 in the posttest while their control group 2 counterparts attained a mean rating of 3.4. Also, during pretest, the statement "I always look forward to English lessons because I enjoy them a lot" received a mean rating of 3.2 and during posttest the mean improved to 3.7 by the first experimental group and 3.5 by the second experimental group. The control groups on the other hand attained a pretest mean of 3.2 and posttest mean of 3.3 in both control1 and 2.

Interview participants were asked how focused and attentive their learners were after scaffolding learning and the respondents gave the following sentiments.

True, the learners are mostly very attentive during the lesson because they do most of the learning activities. For instance in discussion, reading, writing or role play, the learner has to remain focused and attentive, otherwise he will lose track. In fact, there is no way a learner will participate fruitfully if the learner loses focus. Also unlike earlier, the learners listen more attentively because they know my work as a teacher is minimal. I just guide and show the way and they do the learning. They are mostly alert when I want to give an explanation or a clarification, for instance on the format of writing, characterization etc. so unlike the time of lecture method, y learners are more attentive and focused. (ToE1).

Similar remarks were given by ToE2 as follows:

Compared to last time, our students pay a lot attention to the learning activities because they know that is their work. You know as a teacher, I have very little to do when I employ this method. So, since the learners are doing much of the work, naturally they have to remain focused. Maybe if I discover something to clarify, the learners remain very attentive unlike the other method where they even sleep when the lesson is ongoing. At the moment most of the learners are very attentive and alert in class so that they don't mess their work. (ToE2)

The remarks by ToE1 and ToE2 explain why there is an improved mean rating in terms of how focused and attentive the learners are during scaffolding learning. According to the respondents, the learners remain focused on the learning activities because they get fully involved. At the same time, the learners own the learning process which makes them attentive whenever an explanation or a clarification is made by the teacher. Moreover, the learners want to achieve the best out of what they are taught, in order to achieve their goals. From these explanations, it is clear that scaffolding method has a positive effect on the focus and attentiveness of learners to the process of learning.

Finally, the degree on how learners enjoy and look forward to the lesson improved significantly among the experimental groups from a pretest mean of 3.2 to 3.7 in experimental group 1 and 3.5 in experimental group 2. Contrary to this there was minimal improvement among the control groups from 3.2 to 3.3. On how the learners get frustrated when the lesson is interrupted or the teacher is absent rose from a mean of 2.8 to 3.4 among experimental group 1 and 3.2 among experimental group 2. Whereas the control groups mean rating remained at 2.8 both in the pretest and posttest. The difference in the pretest and the posttest mean ratings suggest that the scaffolding teaching technique improves the learners' general subject-interest. Similarly, an interview respondent gave some remarks:

I may agree with learners that they are enjoying the lessons and they get frustrated when the lesson doesn't take place. Actually, the enjoyment can be deduced from the active role taken up by the learners. You can see the enthusiasm with which they do their things including assignments, discussions, presentations, asking questions etc. from there I can conclude that my learners are enjoying and if that is the case frustrations can come in case there is no lesson. (ToE2)

Another respondent said:

We are really enjoying our lessons. I do not want to miss any English lesson. We are doing our studies on our own most of the time. Sometimes a teacher comes to class and finds that we have already started to discuss a question or a topic, or if it is a reading lesson we start reading before the teacher arrives. If a teacher forgets we send the prefect to remind him that

the lesson has started. We don't want to miss the lessons because even the topics I have not been enjoying are not that difficult. (LoE5)

From the extracts, ToE2 and supports the findings that more learners are enjoying the learners process and that they get frustrated when the lesson does not take place. The respondent goes on to explain that the learners enjoy because they actively participate in the learning process and they own the process. LoE5 fully supports this assertion and adds that if the teacher delays, learners start off the lesson on their own because after all, the learning process belongs to them. The learners can go to the extent of reminding their teacher about the lesson. This is clear evidence that scaffolding has made learners enjoy the learning process.

From the findings, the study therefore established that the learners' interest to learn English as a subject improved after going through scaffolding technique.

Hypothesis testing

The hypothesis that was tested was: there is no statistically significant effect of scaffolding on subject interest among learners of English. The hypothesis was tested using paired samples t-test analysis as tabulated on table 3.

Table 3: Paired Samples Test- Solution with the Four Control Group Design: Subject-Interest

		Paired Differences			T	Df	Sig.
		Mean	SD	SEM			
Pair 1	Exp.grp 1-Pretest Exp.grp 1- Posttest	-10.84	7.60	.76	-14.33	100	.000**
Pair 2	Control.1-Pretest control.1 –Posttest	-1.19	9.32	1.30	-.92	50	.364
Pair 3	Exp. grp 1 -Pretest control.1 –Pretest	-.22	10.92	1.24	-.18	77	.861
Pair 4	Exp.grp1 Pretest Control.1 Posttest	-1.69	8.71	1.22	-1.38	50	.173
Pair 5	Exp.grp.2-Posttest Control.2- Posttest	10.51	10.19	1.15	9.11	77	.000
Pair 6	Control.1- Pretest Exp.grp.2- Posttest	-10.76	10.32	1.17	-9.21	77	.000
Pair 7	Exp.grp.1- Posttest Exp.grp2- Posttest	-.48	7.20	.72	-.66	100	.509
Pair 8	Contol.1- Posttest Control.2- Posttest	-.69	8.68	1.22	.565	50	.575

From Table 3, a paired samples t-test for Pair 2, $t(50) = -.92, p=.364$ (ns) suggests that there was no statistically significant difference in subject-interest between pretest and posttest mean scores for control group 1. However, test results for Pair 1 reveals that there is statistically significant difference at 1% significance level between pretest and post-test scores of the Experiment group 1, $t(100) = -14.33, p<.001$, implying a statistically significant effect of scaffolding learning strategies on learner interest in English as a subject. Further, from the test in Pair 3, the study found out no statistically significant difference between experimental group 1 and control group 1 pretest results; [$t(77) = -.18, p=.861$]. This shows the randomization process was effective during sampling of the experiment and control groups. However, t-test in Pair 4 confirms that there is no statistically significant difference between Experimental Group-1 pretest and Control Group-2 post-test, $t(50) = -1.38, p=.173$, hence, the use of scaffolding learning strategy has significant positive effect on interest in English subject among secondary school learners. In addition, t-test on pair 5 proves that there is a statistically significant difference between Experimental Group2 post-test and Control Group 2 post-test (without pretest) at 1% significance level [$t(77) = 9.11, p<.001$]. Since the two groups, experimental group 2 and control group 2 were not pretested; the statistically significant effect of scaffolding learning on the learners' subject interest was as a result of the intervention only. This means that the pretest procedures did not influence the overall result, thus the extraneous variable was well controlled. Therefore, t-test in pair 4 and pair 5 suggests that there is a statistically significant effect of scaffolding learning strategy on learner interest in English. Moreover, the mean difference of t-test in pair 3 is not significantly higher than that of pair 4 implying

that, although pretest could have increased the learner's sensitivity or responsiveness to the experimental variable (subject-interest questionnaire items), this influence was negligible.

On the other hand, the result of the test in Pair 6, between control group 1 pretest and experimental group 2 posttest [$t(77) = -9.21, p.001$] shows a statistically significant difference between the two groups since $p < .001$. But pair 7 which comprises of experimental group 1 and experimental group 2 posttest shows no statistically significant mean difference, $t(100) = -.66, p = .509$. Lastly, pair 8 t-test shows no statistically significant mean difference between control group 1 and control group 2 posttest, $t(50) = .565, p = .575$. The t-test result for pair 6-8 suggests that external factors had not interfered with the study.

Thus, using the results in Pair 1 supported by findings in Pairs 2-8, there was sufficient evidence to reject the null hypothesis that "there is no statistically significant effect of scaffolding on subject interest among learners". It was therefore concluded that although there could have been some confounding effect of pretest, there was statistically significant effect of scaffolding strategies on learners' interest in English among secondary school students. Hence, the use of scaffolding strategy is effective in improving learners' interest in English as a subject.

The study thus rejected the null hypothesis and adopted the alternative hypothesis that there is a statistically significant effect of scaffolding on subject interest among English learners.

5. CONCLUSION

Scaffolding had a positive effect on the learners; subject interest. Learners who learned using scaffolding method scored highly in the posttest subject interest scores compared to those who learnt normally; hence the study concluded that the high scores arose from the application of scaffolding method. From the experimental data, the study concluded that there was a statistically significant effect of scaffolding on subject interest. Further the study concluded that since all the extraneous and confounding variables such as pretest sensitization were not included in the study, only scaffolding had the positive effect on subject interest among learners of English. Additionally from qualitative data, the study concluded that learners who learnt using scaffolding method improved in terms of active participation in classroom activities. Based on the findings, the study concluded that scaffolding was highly effective in improving the interest of learners to learn English as a subject.

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