

## The Impact of Project Based Instruction on English Language Achievements: The mediating role of ‘Motivation and Group work’ for Language Teaching Research.

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**Abstract:** Although researchers have found project based learning (PBL) as a strategy with strong significant effect on academic achievements in English among second language learners, less is highlighted about how motivation and group work impact the facilitation of this pedagogic method amidst the challenges of its implementation in current classrooms. Previous works lacked empirical evidence for the mediating role of motivation and group work in the relationship. This study examined the pathways through which second language (L2) learning skills and life skills were improved through PBL via the mediators. One hundred first year students of Michael Okpara University of Agriculture, Nigeria were subjected to various authentic problem-solving, critical thinking and life skills through the mediators. Data were generated through the instrument of direct projects and report writing on learners' perception of working in groups and their motivation to achieve academic projects. The projects were scored using the scales of originality of projects, aesthetic value, and the surface assessment of durability of projects. Results showed no record of low performance of learners with PBL. Content analysis of learners' perception on PBL, analysed in simple percentages revealed that the effects of motivation and group work were direct on L2 achievements and eliminate anxiety, group dynamics issues, time wastage and irregularity learning associated with PBL implementation. The results suggest that project based instruction impacts L2 achievements when students are motivated and are engaged with language activities through group/ team work.

**Keywords:** language achievements, motivation, project-based instruction, group work..

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### Introduction:

One of the most important fundamentals for building a The processes of transferring knowledge and skills are regularly evolving especially in a time when the need to guide learners to develop those life skills that would enable them succeed in the real life is in demand. Schools are gradually responding to the call to adopt those pedagogies and approaches that support real life skills. Hodge, Danish & Matin (2013) define life skills as those behavioural, cognitive and interpersonal skills that enable individuals to succeed in various areas of life. They are those abilities that enable learners to deal appropriately with life's challenges and demands. Prajapati, Sharma & Sharma (2017) classify life skills into three types, viz: thinking skills, social skills and emotional skills but key organizations including UNICEF, UNESCO, and WHO in Prajapati et al made a broader classification of life skills to include: self-awareness, critical thinking, creative thinking, decision making, problem solving, effective communication, interpersonal relationships, empathy, coping with stress, and coping with emotion. All these skills overlap and mastering of these skills are instrumental to the mastery of human languages. Since life skills are fundamental to human's success in everyday life, it is incumbent on schools to adopt strategies that promote the teaching and learning of these skills. One of those current strategies, according to Wahbel et al (2021) is project based instruction (PBI). Project based instruction is an instructional approach that supports students working in small groups on academic tasks.

### LITERATURE REVIEW

#### PROJECT-BASED INSTRUCTION

Some researchers have argued on the origin of Project based learning, henceforth PBL. Some traced PBL to the works of John Dewey which focused on learning by doing (Dewey, 1897). His theories on learning advocated a lifelong learning approach where learning takes effect when students interact during real life tasks (Dewey, 1897 in Wahbeh 2021). Other researchers, however, traced PBL to the American philosopher Kilpatrick (Peterson, 2012). Kilpatrick was reckoned as a student at Teachers' College, Columbia University who studied under Dewey where Dewey's pragmatic and experiential learning philosophy shaped his pedagogic theories and approach to the project based method (Cremin 196 in Capraro etl el 2018). Kilpatrick therefore, should be regarded as an exponent of project based learning theory. Kilpatrick defines PBL as a set of meaningful activities in a social environment that focuses on a specific content or on a theme. Both scholars exponentially impacted classroom teaching through their PBL approach and their works are proofs that the approach dates back to 19th century but its application in the classroom is lately trending. Wahbeh et al observed that PBL focuses on learning by doing, experimenting, problem solving, teamwork, social skills, understanding, collaboration, partnership, and taking responsibility. Many scholars have attempted the definition of PBL in the context of language learning, and there seems to be no generally accepted definition of the strategy as common to other concepts and fields. The definitions as found in literature however, are complementary and reveal common features. For example, Morgan (1983)

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defines PBL as “an activity in which students develop an understanding of a topic or issue through some kind of involvement in an actual (or simulated) real-life problem or issue and in which they have some degree of responsibility in designing their learning activities” (p.10). Becket (2002) defines PBL in terms of time and activity. He sees PBL as “a long term activity that involves a variety of individuals and cooperative tasks such as developing a research plan and questions, and implementing the plan through empirical or document research that includes collecting, and reporting data orally and/or in writing”(p.54). The two definitions can be summarized and reduce PBL as a teaching method that enables the integration of the two factors of social constructivist theory, especially collaborative learning and teachers’ scaffolding in classroom. It is a teaching strategy that enables learners the opportunity to interact with peers, exchange ideas, ask questions, and take responsibility of their learning activities. In PBL, learners explore different tasks, and to Blumenfeld et al (1991), it is a pedagogy that engages learners in sophisticated and substantial opportunities for deep understanding of curricular content. Students are therefore provided with academic atmosphere that enables them to reproduce languages, develop different skills, adapt what they already know (Laverick, 2018) and apply new knowledge.

PBL poses as one of the answers to the concerns of teachers and researchers on how learners can really understand the content or material, and not just how to pass tests. Within the last decades, researchers have used PBL to establish the link between student motivational orientation and cognitive engagement in schoolwork (Nolen, 1988; Pokay & Bloomfeld, 1990; Pintrich & De Groot 1990). Some researchers have suggested PBI as a tool which fosters collaboration among students (Lam, et al 2009 ), integrates concepts from a number of disciplines or fields of study thereby promoting interdisciplinary exchanges (Blumenfeld, et al, 1991), and enhances student motivation and promote self-directed learning (Hmelo-Silver, 2004). When students are subjected to taking ownership over their learning and are faced with the responsibility to choose a way to demonstrate their understanding, according to Tiwari et al (2017), they are motivated to complete a given task in research methodology skills in community based projects.

Previous research identified the six hallmarks of PBL to include: driving questions, the focus on learning goals, participation in educational activities, collaboration among students, the use of scaffolding technologies, and the creation of tangible artifacts (Krajcik & Shin, 2014). All these areas of PBL are important for a real-life inquiry and acquisition of real life skills which PBL promotes but creation of artifacts that solve authentic problems, according to Guo & Admiraal (2020) is more crucial. This is because the world is evolving, sustaining and advancing through the successful completion of

projects that can help in the overall satisfaction of man on the earth and in solving real-world issues. PBL therefore is an attempt to provide learners with what Guo et al (2020) called ‘hard skills (cognitive knowledge and professional skills) and soft skills( problem-solving and teamwork)’” (p.1)

Literature is rich with empirical studies on PBL which indicated that the strategy increased development of learners’ knowledge, skills and achievements although many of them predominantly focused on PBL in post-secondary education (Helle et al, 2006; Ralph, 2016; Reis et al (2017). Maulany (2013) carried out a two-cycle action study with primary school students in Bandung to examine the impact of PBL on the learners’ speaking skills. More specifically, he wanted to establish what aspects of the speaking skills of learners were improved and the activities used in PBL to improve learners’ speaking skills. He used the instrument of pre-and post-tests administered to the respondents and the two results were compared. Results revealed that comprehension and vocabulary as adapted from Harries (1984) and Brown (2004) were the aspects of the learners’ speaking skills that recorded improvement. His findings further showed that among the 21 activities proposed by Brown (2004) and Kayi (2006), nine were used, namely drilling, storytelling, directed response, picture-cued, translation of limited stretches of discourse, question and answer, discussion, games and role-play.

Chu et al (2011) contributed to literature on the impact of PBL on reading skills where they examined the potential effect of mingled collaborative and PBL pedagogies on students’ reading abilities and interest among Hong Kong primary school students. One hundred and thirty two (132) students, eleven (11) teachers and twenty five (25) parents took part in the study. Students’ PIRLS scores before and after PBL were compared using t-tests. The results showed that students’ reading performance significantly improved after PBL projects. Again, their results further revealed remarkable improvements in the students’ overall reading performance as well as in informational and literacy performance. Similar to Chu et al’s study is Kavlu (2015) who investigated whether the application of PBL has any effect on EFL learners’ reading comprehension ability and vocabulary skills or not. Forty five (45) randomly selected first year students of Ishik University (Iraq, Erbil), divided into experimental and control groups participated in the study. The experimental group was taught reading comprehension using PBL pedagogy while the control group was taught conventionally. A statistically significant difference in favor of the experimental group was reported after the experiment. The two studies above suggest that PBL application improves learners’ reading comprehension and vocabulary.

Lately, Bakar, Noordin and Razali (2019) made another significant contribution through the application of PBL in establishing how the strategy can enhance listening

competency of ESL learners in communicative English course in Malasia through a quasi-experimental study. Forty-four (44) diploma students of a technical College in Peninsular Malasia purposely selected for the study were divided into experimental and control groups. While the experimental group was taught communicative English course using PBL for sixteen (16) weeks with eight activities based on Larmer et al's (2015) principles as well as PBL teaching module containing listening activities as treatment, their control group counterparts were only taught through conventional teaching strategy. A pre-and post-listening competency test administered on the two groups followed the instructions with data analysed using t-tests, ANOVA, and Turkey post hoc test. Their findings established correlation as learners in experimental group significantly outperformed their counterparts in listening skills and dialogue listening comprehension.

Preponderant research provides other areas of impact of PBL to include: macro skills, vocabulary development, communication, cultural awareness, learner autonomy, self-efficacy and attitude (Fragoulis, 2009, Hsu, 2014; Kartika, 2020). PBL is found to improve learners' macro-skills after completing projects (Fragoulis, 2009), enhances learners' English proficiency, learning skills and self-confidence (Simpson, 2011), improves knowledge and translation skills (Poonpon, 2017), positively improves learners' attitudes to language learning (Nassir, 2014) and the overall English language skills of learners (Newprasis and Seepho, 2015). Other researchers documented PBL as a strategy that improves learners' enthusiasm, confidence, creativity, self-directed learning and collaborative learning skills (Putri et al, 2017). Again, vocabulary development, recall and retention are significant language skills associated with PBL (Saniel, 2016). In the area of leadership skills, Migdad reported PBL as a strategy that enhances learners' leadership skills and achievements level in vocabulary development. Lately, Mohamadi (2018) study suggests PBL and e-PBL as pedagogies that significantly promote retention of idiomatic expressions. PBL has also been reported to foster students' communication (Bulach, 2003; Vicheanpant and Ruenglerpanyakul 2012), increase learners' understanding of their own culture and other cultures (Gu, 2002; Hsu, 2014; Kim, 2019), students' perception of the development of cultural knowledge (Liu et al, 2006) and development of intercultural communication skills (Ngo, 2014). Away from culture, literature has shown that PBL fosters learner autonomy (Imtiaz and Asif, 2012) and Stoller's (2002) study further revealed that learners' autonomy is developed and expressed through three ways, viz: making decisions through cooperation work, intrinsic motivation and development of self-regulation.

The studies above largely support PBL as a strategy that facilitates learner-active participation and autonomy, however, Eyring's (1997) study reported negative

attitudes that suggest resistance. His participants expressed discontentment with the pedagogy after being engaged with planning, researching and project-related activities. His findings showed that expected team solidarity, empathy and focus were absent. While female participants were properly engaged with the given responsibility, their male counterparts were indifferent. The respondents, however, reported enjoying some levels of learner autonomy and student-teacher relationship associated with PBL. Two years after Eyring's study, Beckett (1999) offered another report where learners negatively evaluated PBL. A significant percentage of his study's respondents (25%) had mixed feelings about the strategy, with a higher percentage (57%) even negatively reporting about PBL in the classroom. When summed up, the percentages of respondents with negative reports and mixed feelings about PBL amounted to 79%, with as low as 11% of respondents that found the strategy facilitative and as a fun.

The beginning phase of implementation of PBL in classrooms is reported to face resistance among learners. Gu (2002) reported losing six students at the early stage of integrating PBL in classroom. The learners, as he claimed, 'found the strategy too hard' (p.206). Gu's findings are commonplace in second language classroom where learners deliberately and inadvertently repel any new teaching strategy. Supporting this observation, Mohamad and Tamer (2021) claim that switching from teacher-centred approach to the student-centred approach was reported to be one of the top challenges experienced by the researcher during his first stages of project based instruction. Other works that recoded negative perception of PBL at the beginning stage of its integration in classroom are Bulach (2003) and Simpson (2011). Some problems associated with implementation of PBL include problems in group dynamics, ie, when few students do most of the work. McCarthy (2019) calls this challenge 'collaboration on not working together' (p.1). To overcome group dynamics issue, he suggested making all graded assignments individual tasks, that is, the teacher should ensure no grade is given for group work. Students are expected to work in teams to collect data, complete tasks for the purpose of gaining understanding through mutual support. Each student thereafter takes the result from the collaborative work to complete individual assessments. Students are basically motivated when group dynamics barrier is broken because each student is compelled to engage appropriately to earn a higher grade that commensurate their performance. Again, as McCarthy pointed out, when all team members are actively involved in project based activities, it eliminates assessment fog (false data about the students' performance). The second challenge to PBL implementation in schools, according to MaCarthy is that students are not used to active learning. Many students are passive acquirers; they enjoy passive learning which over time, their education experiences

have subjected them to. Asking students to be active learners, according to Salsich (2018) is asking them to take risks which are uncomfortable for them. Risk aversion, according to Salsich is possibly reduced by creating environments where failure is just another opportunity to try again and obtain improvement, the teacher modeling what it means to be an active learner and assessing process of learning more than product. When learners express reluctance to engage in discussions and group work, motivation would exterminate such resistance and propel them to grow through self-directed challenges which look difficult but not overwhelming. To get around learners' disquietudes in project based instruction classroom, researchers have suggested motivating them and encouraging social cohesiveness and collaborative learning amongst learners to the point of total engagement (Guyen, 2014). Cheung (2018) suggestion that teachers must explore and adopt necessary motivational strategies to generate initial motivation required for a project based learning is supportive. The strategies adopted by Cheung in his study include: praise, feedback, challenging group work, asking referential questions, and promotion of learner autonomy.

#### **MOTIVATION**

Motivation is defined as the reason for a specific action, that is, it the characteristics of inducing a particular behavior, presenting a sense of direction and continuing it (Kim, 2004). Motivated learners consider learning activities relevant and find reason for continuing it. Gilakjani, Leong, and Sabouri's (2012) definition of motivation is relevant to this study. They define it as 'a motive force, something that prompts, incites or stimulates action'' (p.9). Learning a language requires sufficient stimulation, motive force and prompting. Motivation constitutes enthusiasm, excitement, keenness, and interest. These are motivational constituents that drive a goal to the point of completion and attainment. Research has established significant relationship between motivation and learning outcomes. For example, Cheung (2018) investigated the effect of teachers' motivational strategies on student motivation, attitudes and learning outcomes using 344 first year undergraduate students at a university in Singapore. Classroom observation schemes, student surveys and surveys with writing instructions were used as the research instruments. His study showed that teachers' use of motivational strategies significantly influenced students' attitudes and engagement in language classroom. The fundamental contribution of Cheung's study is that it identifies motivation as a tool that creates a supportive atmosphere for learners. By implication therefore, motivation is a pedagogic tool capable of subduing the initial fear associated with learning a new item or adopting a new strategy among learners. Cheng and Dornyei's (2007) study puts motivation at the epicenter of successful second language development

and achievements. To further highlight the role of motivation in language achievements, Dornyei (1998) claims that even learners with the most remarkable abilities cannot accomplish long term goals, and neither are appropriate curricular and good teaching enough on their own to ensure student achievement without motivation. From Gardner & MaCintyre's (1993) socio-educational model of second language acquisition, motivation is found to play two major significant roles; first, it mediates any relation between language attitude and language achievements. Second, it has a direct role in the formal learning contexts, showing the voluntary nature of the motivated learner's participation in informal L2 learning contexts (Ushioda, 2005). Since studies have shown initial resistance of the integration of PBL in learning environments (Gu, 2002; Mohamad and Tamer (2021) and the fact that literature has not addressed and proffered solution on how to manage the unpreparedness of both teachers and learners to accept the self-regulated learning approach, we attempt to close up the gap by examining the mediating role of motivation and group work in arresting all PBL induced or inherent challenges. The effectiveness of PBL pedagogy at the foundational level, as even revealed above, has been documented, but the mediators capable of overcoming the practical challenges and its technical outcomes have remained unaddressed (Yew & Goh, 2016).

Although motivation is established as one of the key factors the drives language learning success (Chidi-Onwuta, 2016), motivated learners collaborate to achieve any remarkable results in second language classrooms through group/team work. Guven (2014) recorded group work as a fundamental tool to engage students' attention in PBL for brainstorming and problem solving. Authentic conversation, according to Adams (2018), springs forth among learners during team or group work. This study therefore, intends to examine group work and motivation as mediators in achieving success in PBL classroom and subduing the initial untold fear found among L2 learners.

#### **RESEARCH PROBLEM**

PBL was easily advocated to replace the traditional teaching approach which made learners passive rather than active engagers and inquirers in learning and their performance below their achievement scores in the final exam (Lee & Kwan, 1997). PBL, a collaborative, learner-centred instructional approach where students work in groups to construct knowledge and master their course content, amidst its effectiveness as suggested in literature, has inherent challenges of implementation in various classroom settings, especially among unmotivated learners and in unmotivated and resource-less settings. The unpreparedness of both the students and teachers to face the new instruction approach, time-consuming nature of PBL, the anxiety it creates among learners, some group dynamics issues comprising PBL effectiveness, and the less content knowledge learned

have not been consciously addressed in literature. For example, a study by Sugeng and Suryani (2020) reveals through learners' perception that PBL resulted in learning overload, learning irregularity and learning time management. The question therefore is, how can motivation and group work mediate the challenges associated with PBL and at the same time promote learning outcomes?

The objective of the study therefore, is to highlight how motivation and group work impact the facilitation of a project based instruction amidst the various factors compromising its effective implementation.

The guiding research question which addressed the set objective is 'how do the mediators of motivation and group work interface project based learning, and how do they rest the challenges of initial anxiety, group dynamics issues and learners' unwillingness associated with PBL.

### METHODOLOGY

One hundred first year students (48 females and 52 males) of Michael Okpara University were subjected to various authentic problem-solving, critical thinking and team work skills through the mediation of motivation and group work. Participants were grouped into ten team groups, each constituting ten students to complete projects ranging from production of liquid soups, school sandals, raffia school bags, tie and dye wrappers, and local pomades within a specified time. Each project was completed by two different groups whose members actively worked as a team until completion. The lecturers, at every stage of their project based inquiry monitored their artifacts creation and content learning and rewarded them with praises and feedback. Although students worked in groups, they were informed at the outset of this approach that their involvements and participation would be individually scored and graded. That served as a source of instrumental motivation. This is in support of MaCarthy (2019) suggestion that to avoid what he calls 'collaboration on not working together' (p.1), researchers must make all graded assignments individual tasks. Their individual and group performances were evaluated and graded by the researchers but the study presented the group scores for analysis since the impact of group work was examined in the effective implementation of a PBL. The projects mostly lasted for three months. Each group made an oral presentation of their exhibition followed by a written report. Working on the claim of Cordova & Leper (1987) that a teaching strategy providing choices could produce a dramatic increase in students' intrinsic motivation and engagement in learning, the students were presented with projects activities assigned in groups to increase their involvements and arouse interest among them. After their oral and written presentations which were scored using the scales of originality of projects, the aesthetic value of projects, and surface assessment of durability, they were given another opportunity to write reports of

their experiences working in groups and how they were motivated or unmotivated to carry out the projects. Such written reports elicited their perceptions on mediating roles of group work and motivation on project based instruction. The content analyses of their written reports were made. The assessment of the projects and students' perception on the mediators of motivation and group work in completing their projects yielded the generated data and were annotated with simple percentage. .

### FINDINGS

Table 1: Students' scores on the projects

	PROJECTS	O		AV		SAD	
		OP 50%	WP 50%	OP 50%	WP 50%	OP 50%	WR 50%
Group 1	Liquid soap	35	38	40	42	40	40
Group 2	liquid soaps	36	38	41	40	40	39
Group 3	tie and dye wrappers	36	40	39	40	40	42
Group 4	tie and dye wrappers	35	38	38	40	41	40
Group 5	raffia school bags	37	39	40	40	40	39
Group 6	raffia school bags	38	38	39	40	39	40
Group 7	local pomades	36	37	39	40	40	41
Group 8	local pomades	36	38	39	40	40	42
Group 9	school sandals	35	38	40	38	40	40
Group 10	school sandals	36	38	39	40	40	39

where **O** means originality

**AV** means aesthetic value

**SAD** means surface assessment of durability

From table 1 above, all the students scored 72% and above in their projects; no group scored below a pass mark (50%).

### Table 2: Content perception on motivation in PBL

**Question: What were your interests/ source (s) of encouragement in PBL?**

Perception	Yes	No	100%
Learning a new skill	85%	15	100
Opportunity for team/group work	80%	20	100
Earning a good group grade	80%	20%	100
Promotes group interaction	68%	22%	100
Completion of project	60%	40%	100
It was too demanding	30%	70%	100

The table above reveals desire to learn a new skill as the highest propelling factor (85%) for engaging in the self-regulated, real life skills associated with project based learning. This is followed by the opportunity for team/group work (80%). Other factors that aroused the learners' interest according to the table include: earning a good grade (80%), promotes group interaction (68%) and completion of a project (60%). The table further shows that a minimum percentage of respondents consider PBL as too demanding for them (30%).

**Table 2: Students' content perception on group/team work in PBL**

**What were your experiences working in small group?**

Perception	Yes	No	100%
Group processing	90	10	100
Self-regulated learning	85	15	100
Personal development	80	20	100
Content learning	65	25	100
Overload learning	35	65	100
Irregular learning	30	70	100

The table above reveals group processing as the major benefit or experience of a group work (90%) followed by self-regulated learning (85%). Personal development and content learning are associated with group work in PBL as revealed in table 2 above and recorded 80% and 65%, respectively. The table further recorded low percentages for overload learning (35%) and irregular learning (30%) as experiences of PBL through group work.

## DISCUSSION

The results of the self-regulated project learning as revealed through the findings are suggestions that learning outcomes are positively favourable when real life skills which PBL promotes are taught. The scores of the students were significantly above average, no record of a low performance was associated with PBL. The artifacts produced by the students were assessed through the scales of originality, aesthetic value and the surface assessment of durability of the products and these rubrics made project activities active and constructive. There was a significant rise in authentic interaction among the students during the production of those artifacts. This result aligns with Fang and Warschauer (2004) which explored the use of project based learning in the form of technology integrated into the normal traditional lecture courses in a Chinese university. They used observation, surveys, interviews and text analysis to examine two project-based courses offered by Chinese students. The results showed that project based instruction affected learning processes and outcomes and increased authentic interaction among the participants. The present study further supports Piaget (1980) study which suggests that learning is an active process and the learner is a knowledge constructor.

Using content analysis (Mayring, 1999) to analyze learners' perception on what motivated or discouraged them to engage actively in PBL, learning a new skill was the main factor that engendered their active involvements in the projects. A greater percentage of students, as

revealed in the findings enthusiastically embraced PBL instruction because it offered them opportunity to learn a new skill. Students' responses that supported learning new skills include, 'I do not know how to make liquid soup' 'I want to learn a skill that would support me when I leave school', 'life skills are very important', 'process of making raffia bag is a bit complex'. The result supports earlier work by Craik & Watkins (2000 cited in Ilter (2014) which examines the variables that can affect learning in the classroom. Their study found out that learners are unusually able to allocate efforts to learning prioritized over unimportant materials. New skills are prioritized over normal rote-learning experiences. Traditional method of teaching does not support group work learning, hence, when opportunity was offered the learners to problem-solving, critical-thinking and team/group work characterizing PBL, they jumped at it and it became their source of motivation. The results further shows that students were motivated by access to group interaction which fosters confidence among learners in addition to Brumfit (1984) observation that 'naturalistic environment' is what group work provides(p. 9). The results above further showed that PBL is a demanding pedagogy. The finding is in keeping with Sugeng & Suryani (2020) earlier study which associated over load with PBL method. Combining real life activities with learning content can be challenging but not overwhelming.

The content analysis which sought to elicit learners' experiences in group work (Table 3) revealed how students perceived working in a small group as an activity that engenders completion of certain projects, content and helps them to manage their own learning strategies. Their perception revealed group work as a strategy that facilitated group processing and self-regulated learning. This supports Sugeng & Surgeng (2020) that working in groups even among adults enhances professional skills in oral communication. The finding however, contradicts an early study with a report that group work constitutes difficulties in learning especially to inexperienced learners and those who do not appreciate the value of collaborative work

(Stauffacher & Walter 2006). Students learn to brainstorm, investigate, analyse and comprehend the viewpoints of one another in PBL through group work. The students also perceived that as they cooperate in their investigations, they achieve personal development. Personal development was highly associated with PBL mediated by group work. The result is consistent with previous studies by Sendaq and Odabasi (2009) and Kek and Huijser (2011) conducted in different contexts. These works confirm the conceptual features of PBL approach as a learner-centred pedagogy that emphasizes the deep-cognitive processing of students through in-depth learning. Concept learning was recorded as another benefit of PBL through the mediator of group work. The result is not at variance with an earlier study which indicated that teachers' understanding develops through PBL approach (Almulla, 2020). The result also aligns with another study on PBL which saw the approach as a vehicle that promotes learning of academic content (Larmer, 2022) amidst providing opportunity to explore real world issues.

The respondents reported PBL as constituting over load learning and irregularity. The responses that suggested over load and irregularity include: 'it takes a lot of time', 'one cannot work at his own pace', 'our group members are always meeting', it takes a lot of time to execute, and 'sometimes we get different answers and even disagree'. The result is not indifferent with Gu's (2002) report of a high level of discomfort which learners reported as associated with PBL especially at the beginning of the project.

## CONCLUSION

This study which examined the mediating role of motivation and group work on implementation of PBL and in downing the common resistance associated with the approach found the mediators sufficient pathways through which second language (L2) learning skills and life skills were improved. Learning a new skill, group processing, earning a good grade, and personal development, promotion of group interaction were among the motivational

and group work factors that downed fear, group dynamics issues and learners' unwillingness associated with PBL. While implementing the PBL implies various challenges ranging from initial anxiety among learners, time wastage for students in critical thinking, exploration, analysis, and problem solving, as well as challenges of group dynamics, adopting the instruments of motivation and group work in PBL, as the results suggest, are direct on second language achievements and eliminate all forms of time and free riding, over load and other reported challenges in implementing the innovative approach in our present classroom. The study is limited in its scope as only the variables of group work and motivation were investigated in PBL implementation. Future research should address the role of macro skills in PBL implementation and investigate how time can be restructured to suit the objective of adopting PBL in today's classroom.

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